C677
T35b

VOL. 86 NO. 1

textile bulletin

JANUARY . 1960

The Outlook For 1960 Is Bright

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Over 100 West Point Pacesetters sold since introduction prove

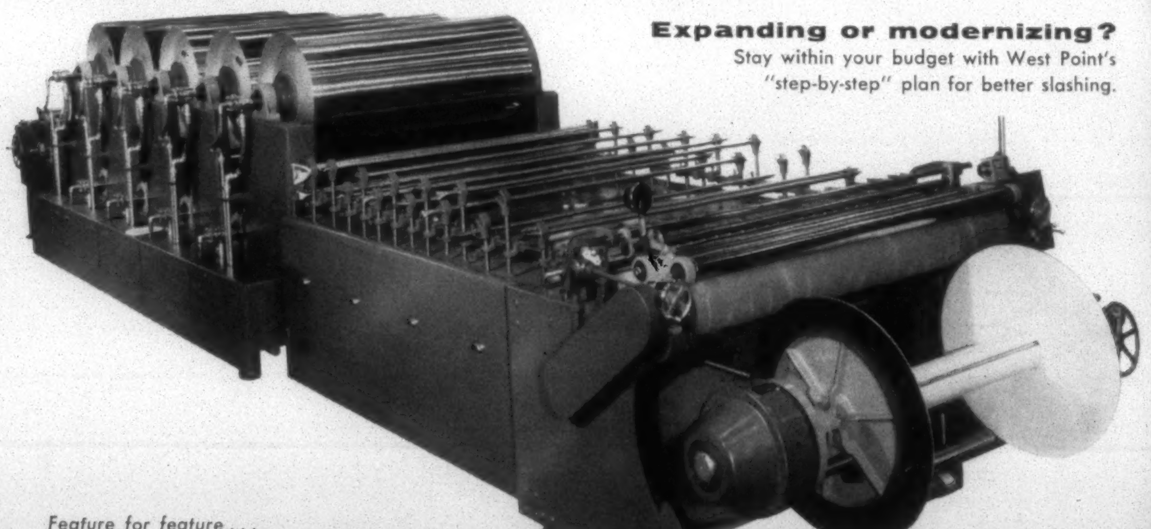
WEST POINT LEADS . . .

☑ **in quality.** West Point's Pacesetter multi-cylinder slasher features the largest cylinder journals, the largest bearings, the largest sprockets, the heaviest frame, the greatest access to warp, a high-capacity versatile size box, and a rugged head end with the best and simplest beam drive.

☑ **in sales.** Since the October 1958 Greenville textile show, more than 90 West Point Pacesetter slashers have been ordered by leading mills. An overwhelming preference for the long-range value of the West Point Pacesetter.

☑ **in installations.** West Point leads the field with more than 200 modern slasher installations in the last four years. We hope you will be able to visit several of these and see for yourself why West Point's Pacesetter is the outstanding slasher in the textile industry today.

Expanding or modernizing?
Stay within your budget with West Point's "step-by-step" plan for better slashing.



*Feature for feature . . .
West Point sets the pace in quality.*

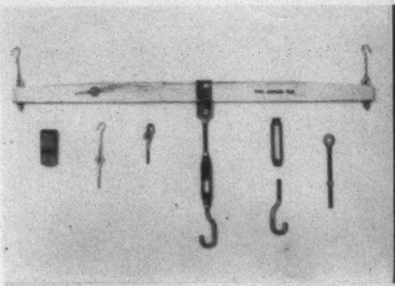
WEST POINT *Foundry & Machine Company*
WEST POINT, GEORGIA

SAVE

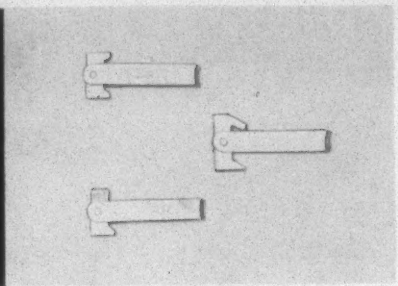
TIME AND MONEY

ON LOOM

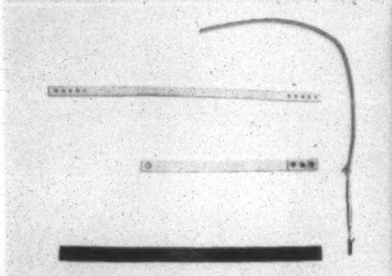
CHANGE-OVER ITEMS



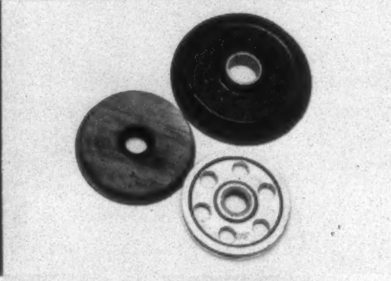
JACKSTICKS AND PARTS



STIRRUPS, LOOPS, JACKEYES

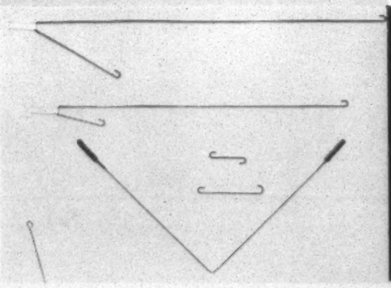


STRAPPING AND HARNESS ADJUSTERS

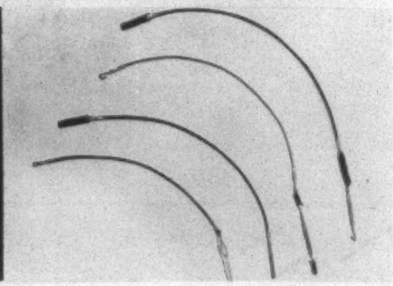


PLASTIC, WOOD, ALUMINUM SHEAVES

WIRES, HOOKS, STIRRUPS



CORDS AND HARNESS ADJUSTERS



THESE ARE ALWAYS "ON THE SHELF" READY FOR IMMEDIATE DELIVERY

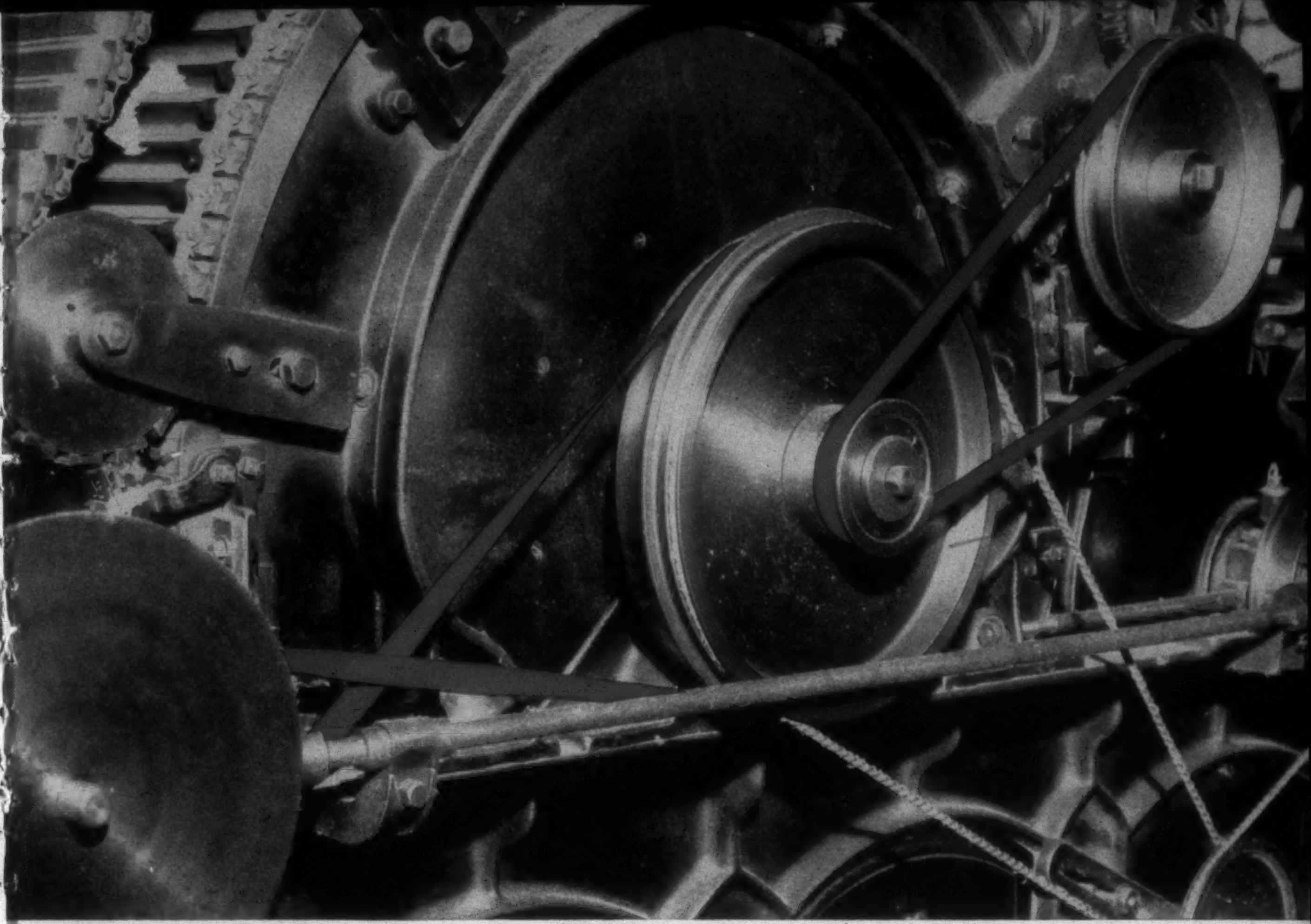
. . . also pull down springs, loom anchoring pads, take up roll covering, shuttle fur.

THE 'P' IS FOR PRONTO!

BATSON HAS THEM... and we will send them to you immediately. Orders will be filled the same day received... without delay, thus saving you lost time and money. Phone Greenville CEdar 2-7691 and relax — your order is already on the way!

LOUIS P. BATS[illegible]

P. O. Box 772
GREENVILLE, S. C.



EXTREMULTUS belting helps produce better sliver. Eliminates slipping and resulting web variation.

for increased textile mill efficiency

EXTREMULTUS

THE BELT THAT WON'T STRETCH
. . . WON'T SLIP

THE BEST DRIVE AT THE LOWEST COST!

EXTREMULTUS is not merely a new name. It is a new *kind* of belt. It combines a polymer core — for strength and elasticity — with chrome tanned leather for high friction and flexibility. It is unique; it has never been successfully imitated.

EXTREMULTUS eliminates start-up problems; keeps tension; gives smooth, constant speed; splices quickly, reduces bearing loads — and outlasts all other belting.

EXTREMULTUS belts have been job-proven in hundreds of textile mills and in many other industries. Mills that have tried it are now converted to EXTREMULTUS 100%.

794603

EXTREMULTUS, INC.

25-11 40th Avenue Long Island City 1, N. Y.

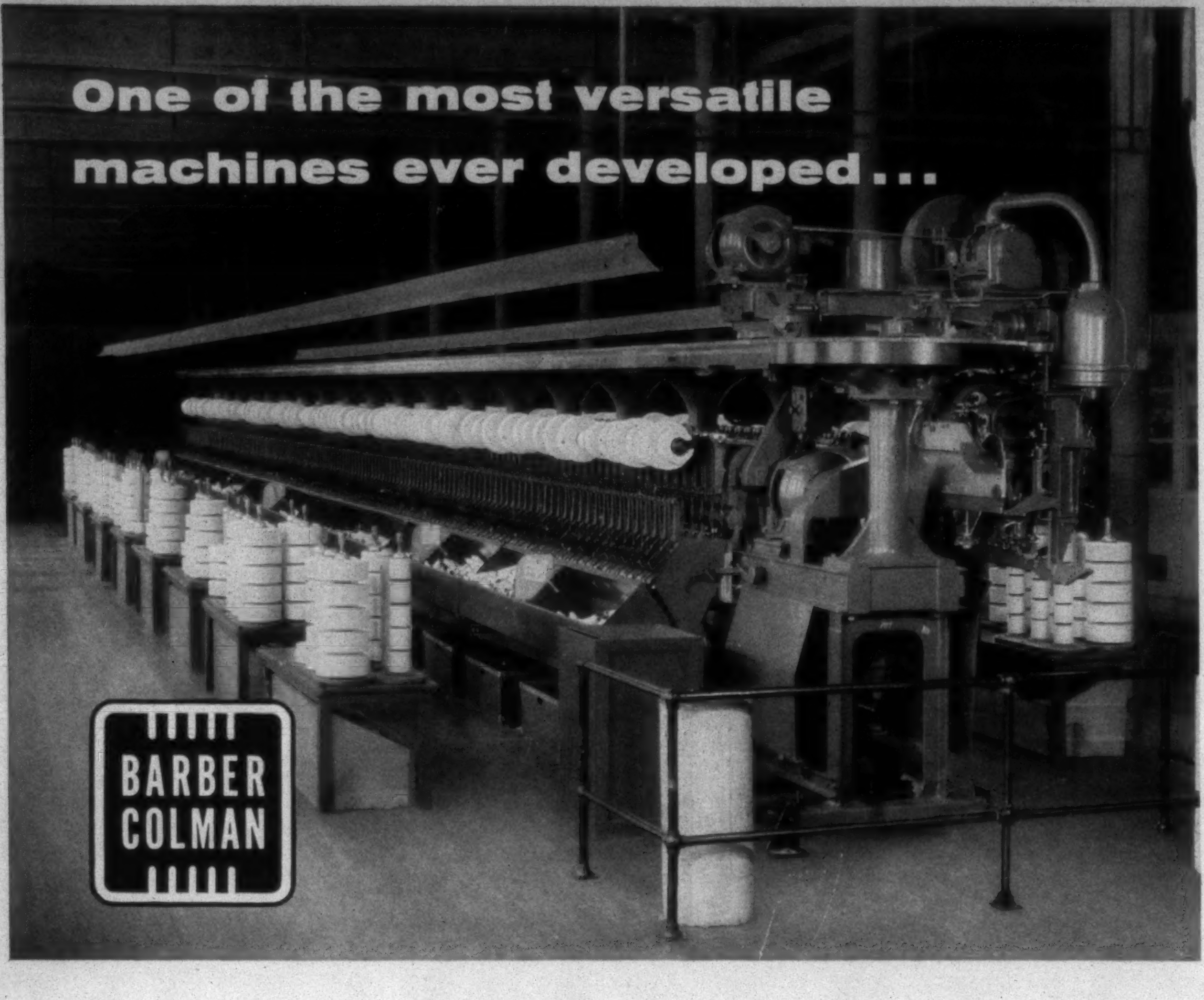
EXTREMULTUS, INC. B

25-11 40th AVENUE
LONG ISLAND CITY 1, N. Y.

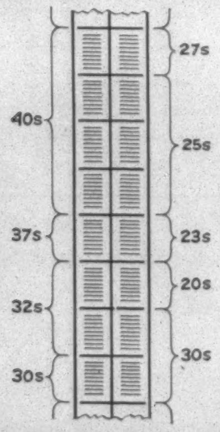
☐ Send me EXTREMULTUS catalog.
I would like more information on how EXTREMULTUS:

☐ Keeps tension
☐ Eliminates start-up problems
☐ Outlasts all other belting
☐ Gives smooth, constant speed
☐ Reduces bearing loads
☐ Splices quickly

NAME ....
TITLE ....
COMPANY ....
ADDRESS ....
CITY .... STATE ....



MULTIPLE-COUNT SPOOLER



Sale yarn mills and producers of piece goods that use various counts of different mixtures will find that this machine can be a very profitable investment. It is the famous and familiar Barber-Colman Automatic Spooler, but now you can wind . . .

A DIFFERENT COUNT EVERY 9 UNITS

The machine is built in "bays" between posts that support the traveler track, with nine bobbin-to-cheese winding units in each side of each bay. Empty bobbins, instead of being conveyed to a single sorting table, drop into separate boxes under each bay, thus enabling each group of nine units to be loaded and run with a different yarn. Starter boxes and cheese tables are set up individually for each bay. The only limitation is that the extremes of different counts on the machine at any one time must fall within the range of the knotter in the traveler. Changes can, of course, be readily made at any time, and any number of bays can be run on identical yarns. (Note the dividers between the bobbin trays on the machine shown above.) *Full details on the many adaptations of this versatile machine can be obtained from your Barber-Colman representative.*

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

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Sao Paulo, Brazil

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11, Bingo-Machi, 3-Chome,
Higashi-Ku
Osaka, Japan

PAKISTAN
Associated Agencies
(M'cr.) Ltd.
Piccadilly House
11 Piccadilly
Manchester 1, England

PAKISTAN
Associated Agencies
(M'cr) Ltd.
730, Muhammadi House,
McLeod Road
Karachi 2, Pakistan

Spartan Mills leads with NEWEST in Frame Cleaning

To keep more frames cleaner than ever before, Spartan Mills is first with the newest combination for cleaning:

① BAHNSON CROSS-JET CLEANER

- Flexible trunks for each side of frame clean creel, drafting system, and frame. Multiple air nozzles in trunks provide total frame cleaning.
- High air handling capacity with adjustable air volume for each area of frame.
- Oscillating air outlets provide 180° overhead cleaning, plus track and conductor bar cleaning.

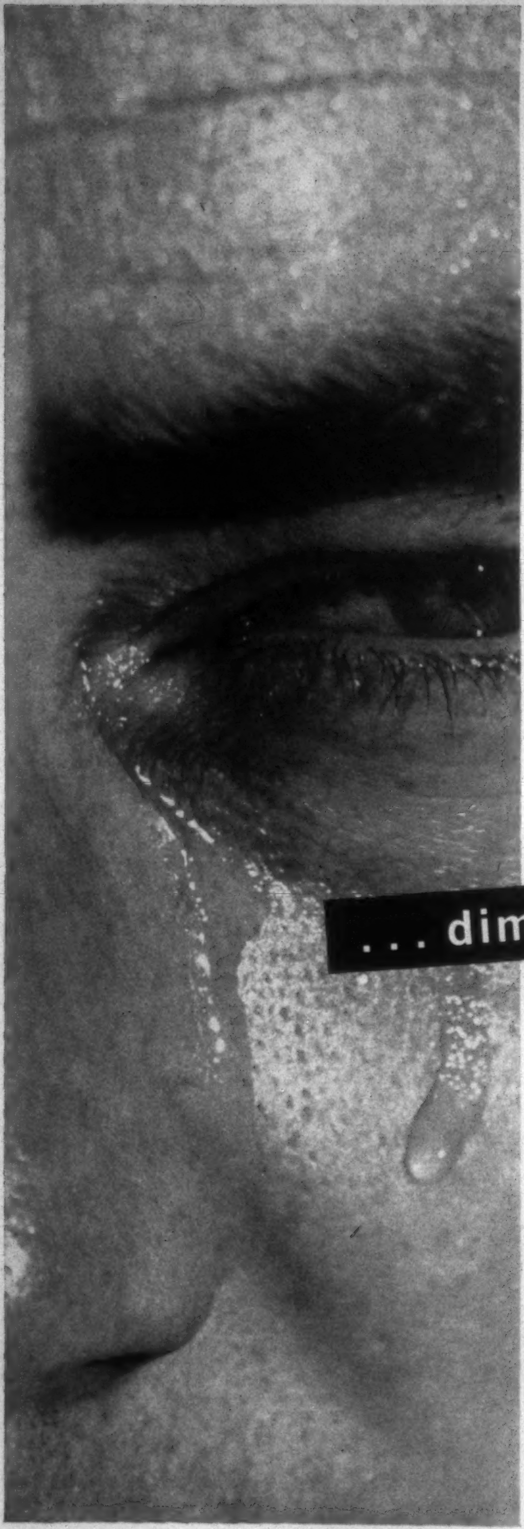
② BAHNSON VERT-I-RAIL TRACK

- First modern creel-mounted, single rail I-beam track offered for frame cleaners.
- Wider surface for wheel contact results in minimum track wear, maximum track life.
- Shielded conductors are open at top and bottom for easier air cleaning and maintenance.

Bahnson AIR-O-MATION

AIR AT WORK FOR INCREASED PROFITS

THE BAHNSON COMPANY, WINSTON-SALEM, N. C.



CROWN'S NEW C-TRON

LOW FREE FORMALDEHYDE RESIN

. . . diminishes odor problems

often eliminates afterwash

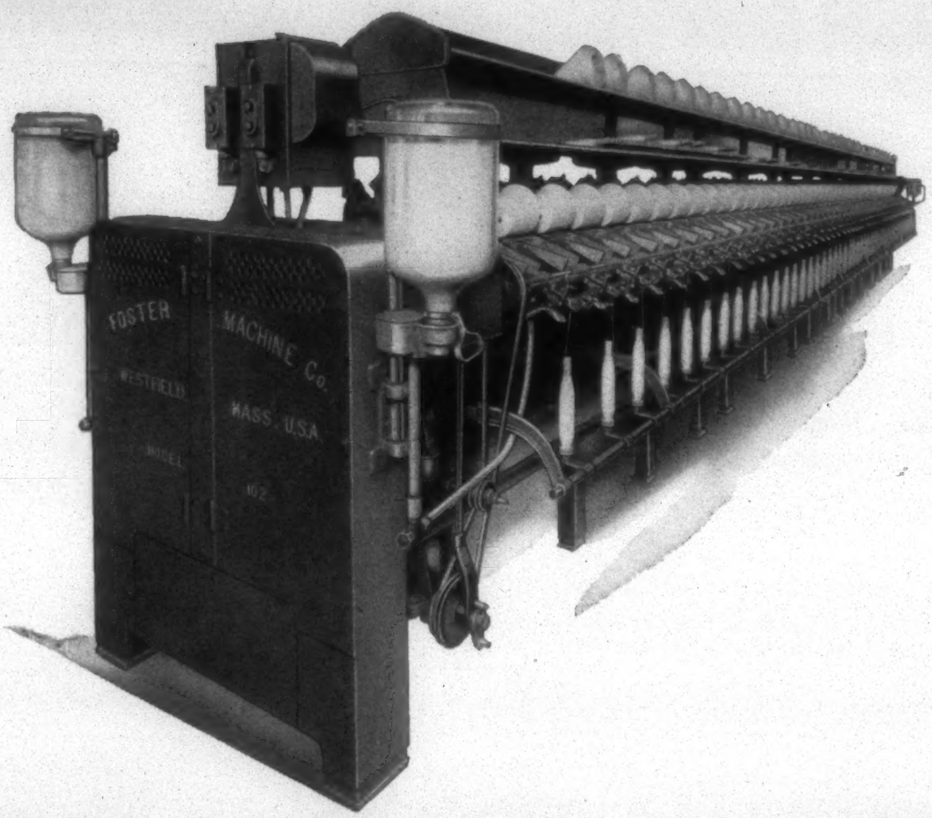
While imparting high quality crease and shrink resistance, Crown's C-TRON resin solves formaldehyde odor-problems . . . both in the processing plant and in the finished fabric. Its extremely low free formaldehyde content has enabled many plants to eliminate the afterwash process entirely!

Crown's representatives will gladly give you complete details concerning the new C-TRON thermosetting resin including how it may solve any resin problems you may have involving deleterious effects upon light fastness of reactant type dyestuffs. Call your man from Crown — or write direct!

Crown Chemical
CORPORATION
240 INDIA STREET, PROVIDENCE, RHODE ISLAND
Peterboro, N. H., Greensboro, N. C., Burlington, N. C., (Warehouse), Greenville, S. C., Ware Shoals, S. C.
IN CANADA: Marwin Dyestuff of Canada Ltd. IN SWITZERLAND: Bubeck & Dolder, Basle, Switzerland.

FOSTER MODEL 102

Flexibility - Economy - Quality Winding



What "Flexibility" Means To YOU

The Foster Model 102 Winder is a *safe* investment, because it is adaptable to changing requirements. And changing requirements are the order of the day. This machine is suitable for any twist or count of yarn (except the very coarsest) and for any type of spun fibre — natural, synthetic or texturized. It can be equipped to wind traverses from 2¼" to 6", and to wind knitting cones, warper cones, parallel tubes, or dye packages; or can be built to wind 7" traverse. It will wind any cone taper commonly used and will wind at nine different angles from 9° to 18°. It may be equipped with yarn conditioning attachment, will efficiently handle damp yarn and soft twist yarns requiring little or no tension. Spindles can be readily added to existing machines.

The Economy and Quality features of the Model 102 are equally important, but space does not permit us to enumerate them here. Write for full details.

ATMA
American Textile Machinery
Exhibition - International

Parade
of
Progress

ATLANTIC CITY, U.S.A.
MAY 23-27, 1960

634-B

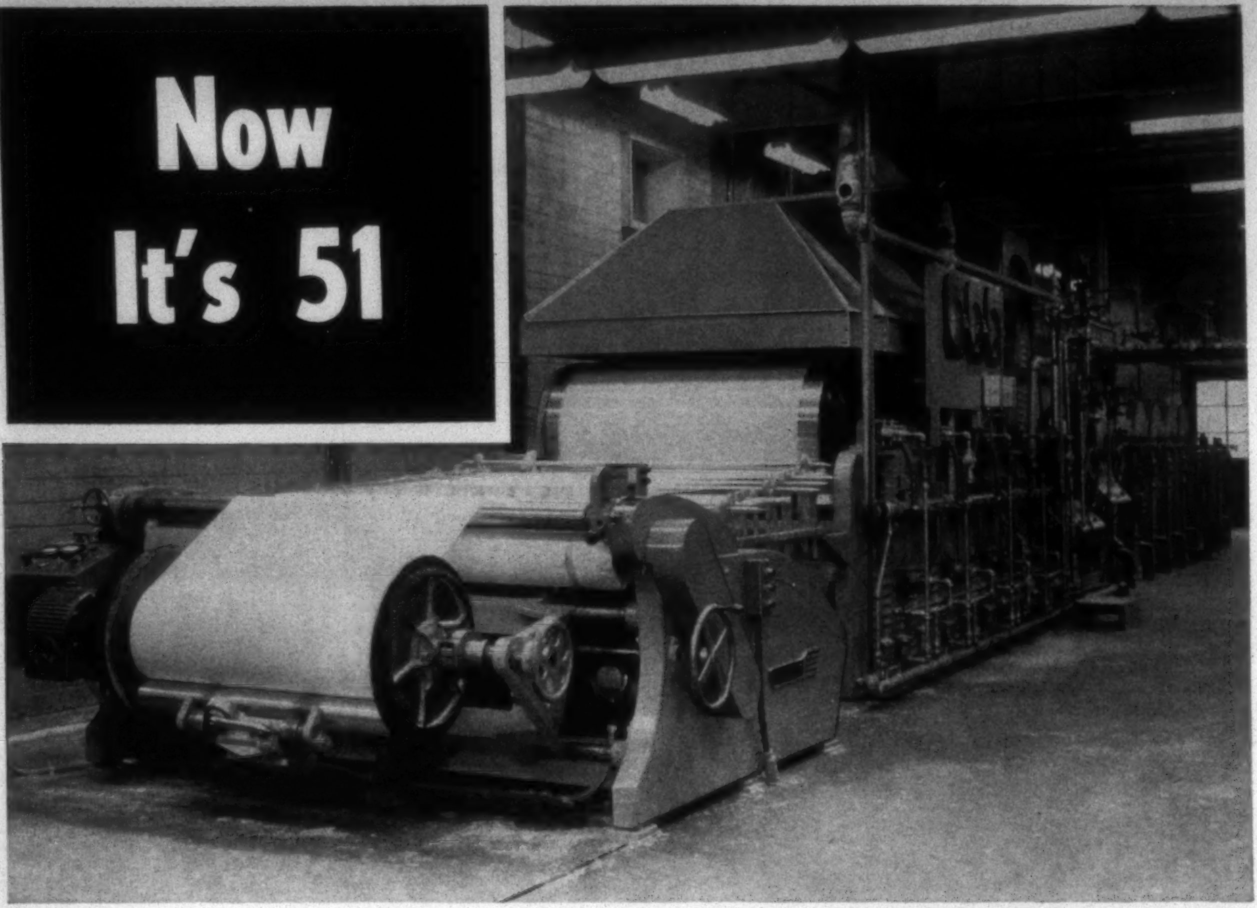
FOSTER MACHINE COMPANY

A Yarn Winder for Every Purpose

Westfield, Massachusetts, U.S.A.

Southern Office—Johnston Bldg., Charlotte, N. C.
Canadian Representative—Ross Whitehead & Company Ltd., 2015 Mountain St., Montreal, Que. and 100 Dixie Plaza, Port Credit, Ont.
European Representative—Muschamp Textile Machinery (Sales) Ltd., Eider Works, Wellington Road, Ashton-Under-Lyne, Lancashire, Engrand

Now It's 51



A Complete Cocker GH Slasher Installation

■ The
■ Cocker
■ GH Slasher

36 Cocker GH Slashers have been installed since the Greenville Exhibition. 15 more are on order. One mill ordered five more after the first installation met all of the exceptional claims Cocker had made for it.

The Cocker GH Slashers already in operation prove that this model is unquestionably in a class by itself . . . in production . . . in moisture regain . . . in size penetration . . . and in increased weave room efficiency and slasher operating efficiency — the World's most modern, most efficient, and most economical slasher.

Write for full information today.

COCKER

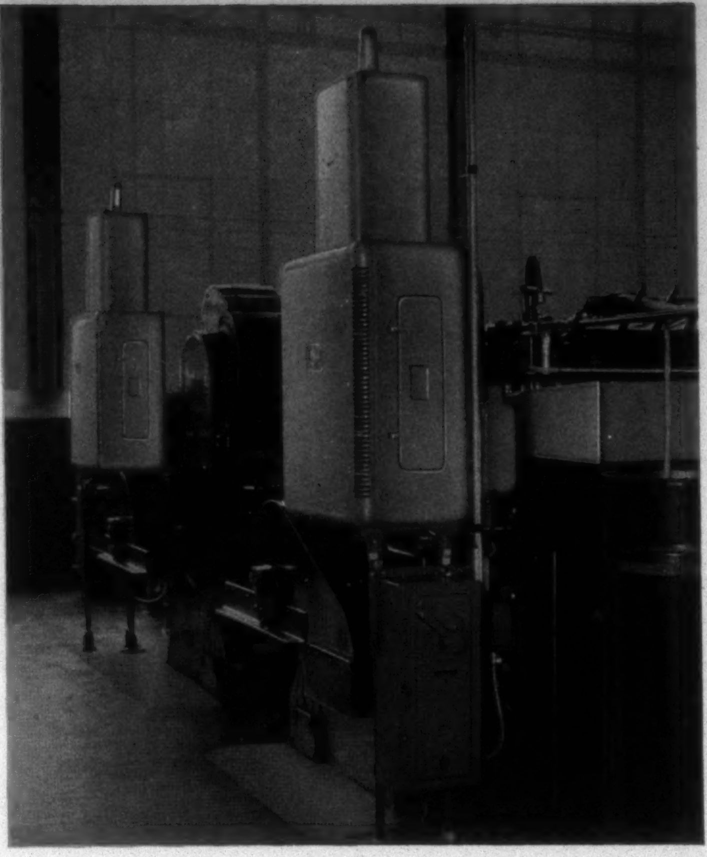
COCKER MACHINE & FOUNDRY COMPANY

IN CANADA:
Contact W. S. Clark
Montreal, Canada
Oxford 7-2242

PLANT & OFFICES
at Ranlo, N. C.
MAILING ADDRESS
Gastonia, N. C.

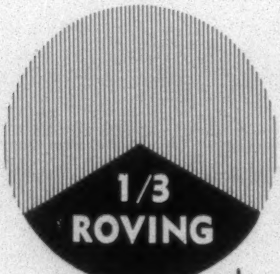
WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

Here's how PNEUMASTOP pays off!



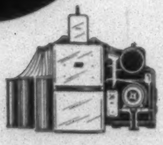
PNEUMASTOP air-cleans and preconditions each strand of roving with ten cubic feet of air per minute. Moisture is added and loose lint and trash are removed to assure *clean, better running* roving on the spinning frame.

Exhaustive ends down tests comparing "PNEUMASTOP quality roving" with ordinary roving prove that *savings* in spinning costs *alone* will pay two-thirds of PNEUMASTOP'S cost in just one year.

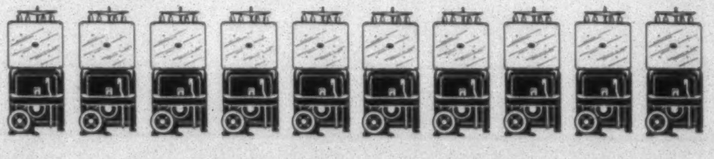


PNEUMASTOP'S dual stop motion stops the frame on creel breaks and sliver run-outs *instantly*, leaving a piecing tail. Broken ends are under control at all times, (even during traverse change) and flyer picking and cleaning time is substantially reduced. These *exclusive* features allow roving tenders to handle more frames than with any other type of stop motion!

Remember this!



One set of PNEUMASTOP



improves the running quality of ten spinning frames in the average mill.

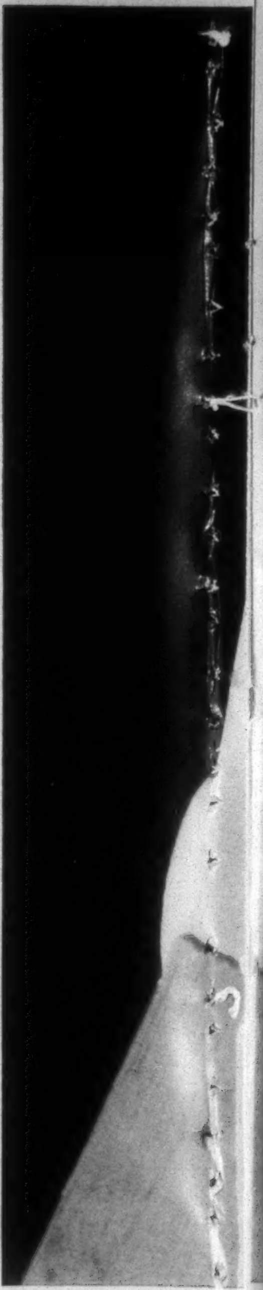
For more information please contact . . .

PNEUMAFIL CORPORATION
CHARLOTTE 8, NORTH CAROLINA

©Pneumafil Corp. 1959

# 7 in a series reviewing the "reasons-why" for the consumer acceptance of Arnel

ARNEL'S "STAMPS" OF CONSUMER APPROVAL



Beyond question, one of the outstanding fiber successes in the past few years has been Arnel triacetate. Mill after mill has given it the stamp of approval for its running efficiency . . . ease of handling . . . its fabric styling flexibility.

But most important of all—*it sells!* In volume. Prime reason for this, of course, is its tremendous consumer acceptance in the face of unparalleled competition in the fiber field for consumer attention.

Behind every fabric made and advertised as containing Arnel are such basic selling ingredients as DIMENSIONAL STABILITY. Here's why:

1. The superior properties possessed by fabrics made of Arnel come about through heat treatment of the finished fabric.
2. Heat-setting imparts exceptional stability to Arnel fabrics so that garments do not shrink out of fit.
3. All fabrics carrying the official Arnel symbol have been pre-tested for performance claimed—including dimensional stability. (Tests are conducted free of charge by the Celanese Fibers Company.)

So take advantage of the great consumer acceptance of Arnel. Let Celanese work with you to develop new Arnel fabrics. Booklets 12A, 13A and 14A, containing the important technical procedure and facts about Arnel, are available by writing Celanese Fibers Company, a division of Celanese Corporation of America, Box 1414, Charlotte, N. C.

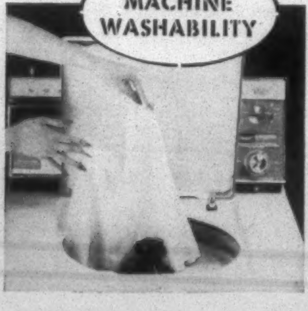
Celanese® Arnel®

District Sales Offices: 180 Madison Ave., New York 16, N.Y.; 15 N. Broadway, Des Plaines, Ill.; Western Merchandise Mart, Room 478, San Francisco, Calif.; P. O. Box 1414, Charlotte 1, N. C.; 200 Boylston St., Chestnut Hill 67, Mass.; 3179 Maple Drive N. E., Atlanta 5, Ga.

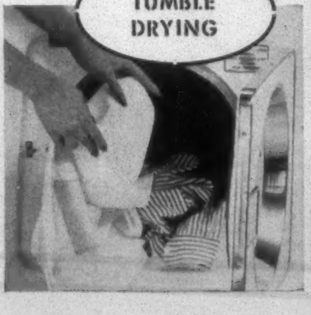
Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Ave., New York 16, N. Y.

In Canada: Chemcell Fibres Limited, 1600 Dorchester Street West, Montreal, Quebec

PERMANENT PLEATING



MACHINE WASHABILITY



TUMBLE DRYING

QUICK DRYING

Arnel . . . a

ARNEL*

*This is the official Arnel symbol—evidence that this fabric of this new triacetate fiber has been pre-tested for performance claimed.

Celanese contemporary fiber

Amco Heliclone Loom Cleaner in Mayfair Mills, Arcadia, S. C.

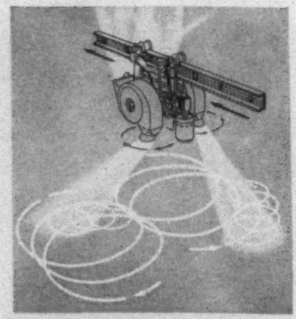
Always "Working For Quality" at

MAYFAIR MILLS...

AMCO HELICLONE® LOOM CLEANERS

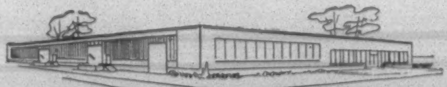
Amco Heliclone Loom Cleaners, which provide automatic, continuous cleaning of 1676 looms at Mayfair Mills, are helping this famous manufacturer maintain his reputation for superb quality and top efficiency.

For the complete money-saving facts about Amco Loom Cleaners, call the American Moistening Company — an organization with more than 70 years' experience serving the textile field.



Rotating nozzles driven by air streams form overlapping circular paths. Results: high velocity bursts of air over loom and warp surfaces for best cleaning. Supplementary outlets clean track and ceiling.

AMCO
Since 1888
Air Conditioning Equipment — Textile Specialties
American Moistening Company, Cleveland, North Carolina
Branches: Atlanta, Ga., Providence, R. I., Toronto, Ont.



Cleveland-Rowan Plant of American Moistening Company. This modern plant is located at Cleveland, N. C. for the fabrication of duct work and sheet metal products.

using
WHITIN
AXI-FEED*
OPENERS

and **AXI-FLO***
CLEANERS

is like

FINDING GOLD IN YOUR OPENING ROOM...

Installed in 277 mills in 25 countries, Whitin Axi-Feed openers and Axi-Flo cleaners are performing so profitably that they are almost as valuable to their user as the discovery of gold in the opening room.

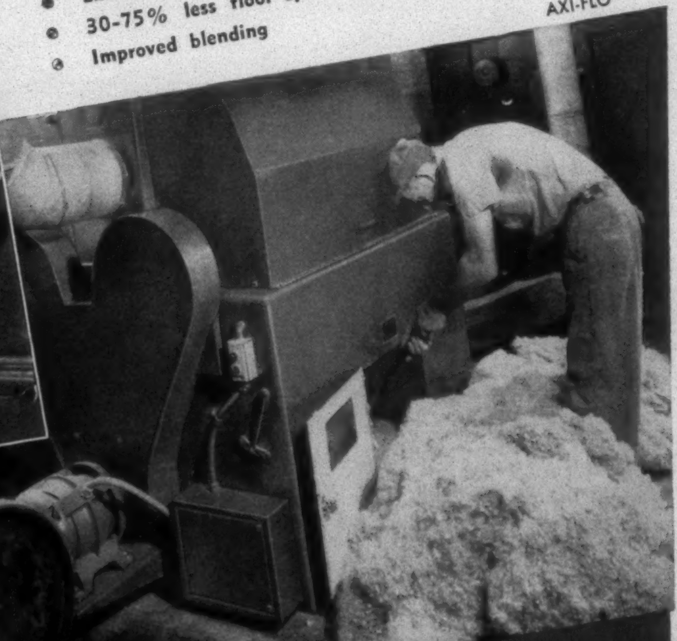
In addition to their cleaning efficiency, mill users report valuable intangible benefits such as: increased card production, cleaner card rooms, improved operations throughout the mill, and cleaner, stronger yarn.

The advantages of Axi-Feed and Axi-Flo are so numerous and their cost so moderate that every mill should enjoy their golden benefits. It will pay you to call your nearest Whitin representative today!

Performance-proved in several hundred mills, they provide:

- **Maximum cleaning**
- **Maximum cotton utilization**
  Many mills have proved that lower grade cotton can produce yarns equal in quality to higher grades formerly run — with savings up to 4¢ or more per pound.
- **Extraction of short fibers only**
- **30-75% less floor space, power, maintenance**
- **Improved blending**

AXI-FEED BLENDERS The Axi-Feed unit shown above can be attached to mixing feed table of many standard blending feeders



AXI-FLO

Photos courtesy Franklin Process Co., Fingerville, S. C.

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MACHINE WORKS
WHITINSVILLE • MASSACHUSETTS
CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA.
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... SEND FOR THIS NEW FREE BULLETIN OF PRODUCTION-BOOSTING FACTS

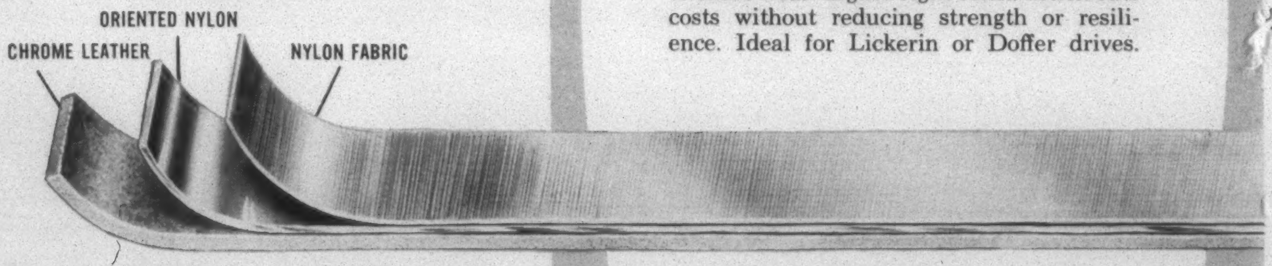
The *improved* belt
furnished endless
for the textile industry

Get this new G&K Bulletin and learn how the "integrated Nylon" construction of G&K endless NYCOR TEXBELT provides:

- Optimum effective tension on fixed center drives.
- High coefficient of friction and freedom from stretch and slip.
- Stretchless — which eliminates take-ups.
- Shock load absorbing capacity that prevents damage to belt or machinery.

MADE IN UNITED STATES

Furnished endless. No mechanical fasteners to cause wear. Lightweight construction cuts costs without reducing strength or resilience. Ideal for Lickerin or Doffer drives.



GET FULL DETAILS IN FREE BULLETIN FROM YOUR NEAREST G & K DISTRIBUTOR

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231 Pryor Street, S. W. Atlanta 3, Georgia
Battey Machinery Company
102 North Second Street Rome, Georgia
Hugh Black
P. O. Box 3055, Station A, 29 Pendleton St., Greenville, S. C.
Dixie Supply Company
P. O. Box 784 Anderson, South Carolina
Industrial & Textile Supply Company
P. O. Box 1319, 1300 S. Mint Street, Charlotte, North Carolina
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1000 Commerce Street Lynchburg, Virginia
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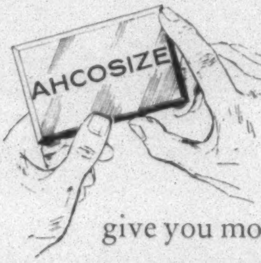
P. O. Box 1429, 250 N. Royal Street Mobile, Alabama
Graton & Knight, Southern Representatives:
Wiley M. Wills, Columbus, Georgia

GRATON & KNIGHT CO.
World's Largest Manufacturer of Industrial Leather Products
Worcester 4, Mass. • Camden 3, N. J.
(A division of L. H. Shingle Company)

ARNOLD, HOFFMAN
invites you
to put your
WARP SIZING
PROBLEMS
in SKILLED HANDS



These are hands that can provide unusual skills, greater facilities and more extensive services to give you more efficient warp sizing and weaving.

From these hands you can draw on a broad new range of warp sizing lubricant products developed over years of experience and through practical research.

Make your slasher room the most efficient in the history of your plant . . . with AHCOSIZE!

Quality
AHCO
PRODUCTS
Integrity

ARNOLD, HOFFMAN & CO., INCORPORATED
55 Canal Street, Providence, Rhode Island • Est. 1815
A Subsidiary of Imperial Chemical Industries Limited, England
West Coast Representative: Chemical Manufacturing Company, Incorporated of California

ICI

477-9

a few **FACTS** about
SWEDISH CARD CLOTHING

The World's Finest Card Clothing
by EVERY Standard

Swedish STEEL
Swedish QUALITY
Swedish PRECISION

Case Histories of Two Well Known Southern Mills That Are Using SWEDISH Clothing

WITH COMPETITIVE CONVENTIONAL CLOTHING	
Grinding Cycle	10 days
Grinding Time	8 hours
Production	10 lbs./hr.

Mill No. 1

Swedish-clothed cards in this mill produce 1,779 pounds more sliver per year than cards equipped with conventional clothing. This is true because the hardened point Swedish clothing is ground only once in 90 days as compared to the ten day grinding schedule for conventional clothing. Moreover, the actual grinding time of Swedish clothing is about half that required for conventional clothing. Actual savings on 5-day week, 50-week year (or 250 working days) are:

Conventional

$$\frac{\text{250 days/year}}{\text{10-day grinding cycle}} = \text{25 grindings}$$

25 × 8 hrs. × 10 #/hr. = 2,000 pounds lost

Swedish

$$\frac{\text{250 days/year}}{\text{90-day grinding cycle}} = \text{2.77 grindings}$$

2.77 × 8 hrs. × 10 #/hr. = 221 pounds lost
2,000 pounds lost
— 221 pounds lost
1,779 pounds *more* production with Swedish clothing.

In addition to the important increases in production the mill has eliminated two grinders at a saving of approximately $7,000 per year through the use of the Swedish card clothing.

Mill No. 2

Swedish-clothed cards in this mill are producing approximately 1,892 pounds more sliver per year than cards equipped with conventional clothing. Mill records show that when the Swedish-clothed cards were stopped for grinding after *185 days* of operation, they had a lower nep count than any of the conventionally-clothed cards. Actual savings on a 5-day week, 50-week year (or 250 working days) are:

Conventional

$$\frac{\text{250 days/year}}{\text{10-day grinding cycle}} = \text{25 grindings}$$

25 × 8 hrs. × 10 #/hr. = 2,000 pounds lost

Swedish

$$\frac{\text{250 days/year}}{\text{185-day grinding cycle}} = \text{1.35 grindings}$$

1.35 × 8 hrs. × 10 #/hr. = 108 pounds lost
2,000 pounds lost
— 108 pounds lost
1,892 pounds *more* production with Swedish clothing.

Over 200 Satisfied Mills In The South Are Now Using Swedish Card Clothing

Immediate Delivery

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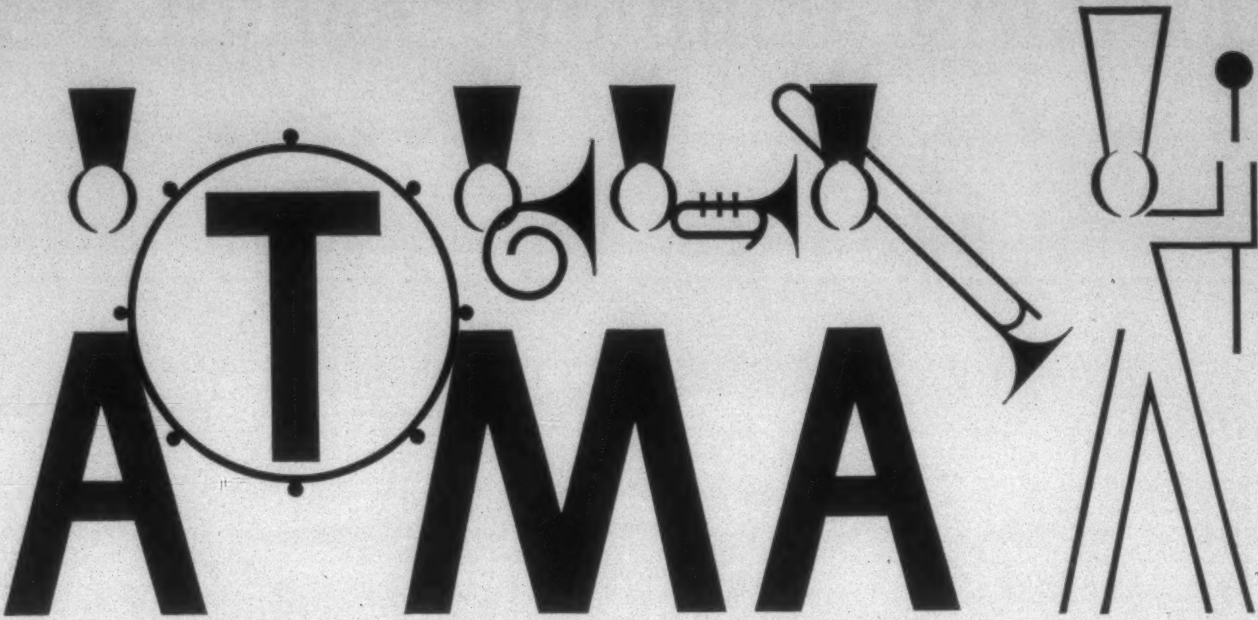

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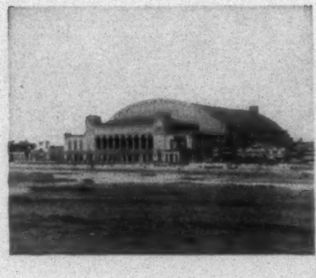
JOIN THE PROFIT PARADE! VISIT CONVENTION HALL IN ATLANTIC CITY, N.J. IN 1960* AND SEE THE WORLD'S LARGEST COLLECTION OF ADVANCED TEXTILE MACHINERY. OVER THREE HUNDRED (300) EXHIBITORS WILL DISPLAY OVER THIRTY MILLION DOLLARS ($30,000,000.00) WORTH OF MODERN EQUIPMENT. RECENT ADVANCES IN TEXTILE CHEMISTRY WILL BE MATCHED BY THE LATEST MECHANICAL DEVELOPMENTS.

ALL UNDER ONE ROOF! PLAN NOW TO JOIN THE "PARADE OF PROGRESS" IN 1960*.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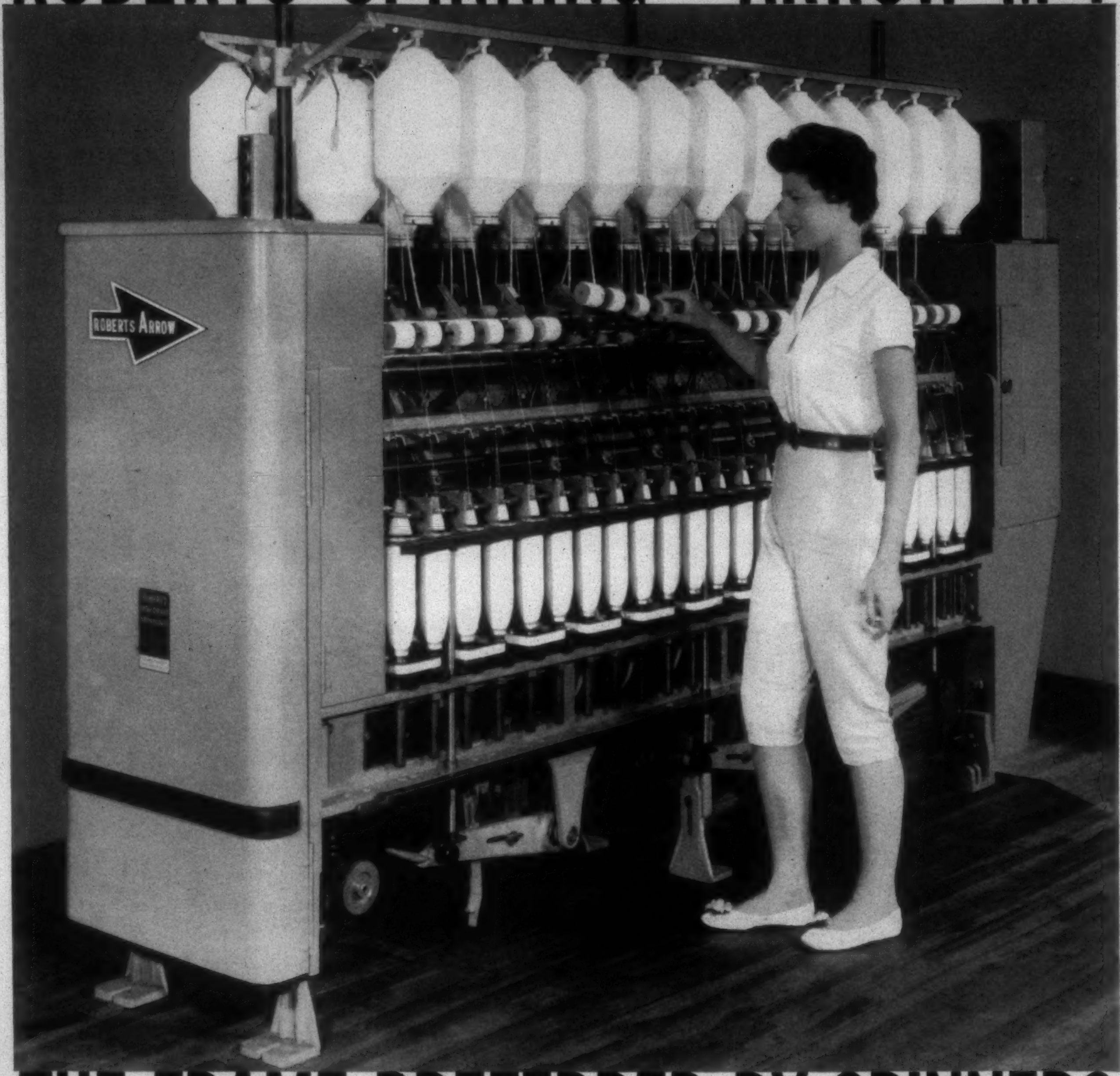
American Textile Machinery Exhibition International

ATLANTIC CITY CONVENTION HALL, NEW JERSEY, U.S.A. *MAY 23 — 27, 1960

ROBERTS SPINNING — ARROW M-1



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COTTON SYSTEM SPINNING

for carded and combed cotton short and long staple

for synthetics and blends up to 3 inch fiber lengths

yarn numbers from 2's to 120's

More than 625 of these highly productive Roberts narrow spinning frames have been bought by mills in the United States, in addition to 725 other Roberts models, all since 1956. This makes a total of 1350 Roberts frames with almost 500,000 spindles . . . unmistakable proof that Roberts Spinning is preferred by Spinners for its unmatched flexibility, higher production speeds, yarn quality and economy.

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SANFORD, NORTH CAROLINA

ROBERTS COMPANY, 450 Seventh Avenue, New York 1, New York
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For The Textile Industry's Use

– NEW MACHINERY, EQUIPMENT AND SUPPLIES –

Shaw Spinning Changeover

Dixon Corp., Bristol, R. I., has developed what is said to be a simple and inexpensive Shaw spinning changeover. By adding the seven oil-less component parts outdated single-apron Shaw drafting elements can be converted to Dixon's two-apron Shaw. Such a change will allow higher drafts consistent with excellent yarn quality. The advantages of double-apron drafting have been proven on casablancas and Roth type spinning, but never before have these advantages been obtainable with Shaw spinning frames, according to Dixon.

The heart of the changeover is the middle top roll apron and cage assembly. This is an oil-less unit which operates on Rulon bearings that are said never to require lubricants of any type. Oils and greases cannot leak out to soil aprons and yarns, according to Dixon. This top middle unit assembly is positioned by cap bars retaining the stationary end gudgeons of the roll, and a central metal leg that rests on the apron bar. Spacing between top and bottom aprons is accurately controlled and can be varied by changing calibrated shim washers under the leg.

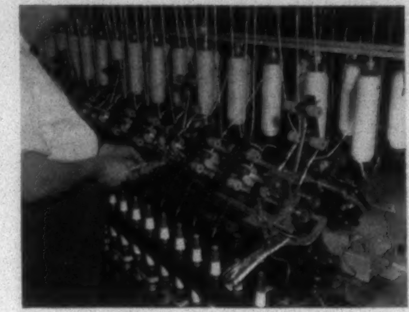
A new oil-less back saddle with Rulon as a bearing delivers pressures to the back top roll, middle top roll, and cage. Increased spring pressure may be applied through incorporation of an additional coil spring. The new spring is inserted in the existing container, already a part of the weighting element. Different weights up to a total of 70 lbs. can be applied to the three top rolls. The Dixon Corp. recommends a total weight of 60 lbs. as best suitable for most drafting conditions. Excessive weight in spinning causes costly maintenance. The new two-apron Shaw drafting is designed to increase yarn strength and evenness and at the same time allow for longer drafts.

(Request Item No. A-1)

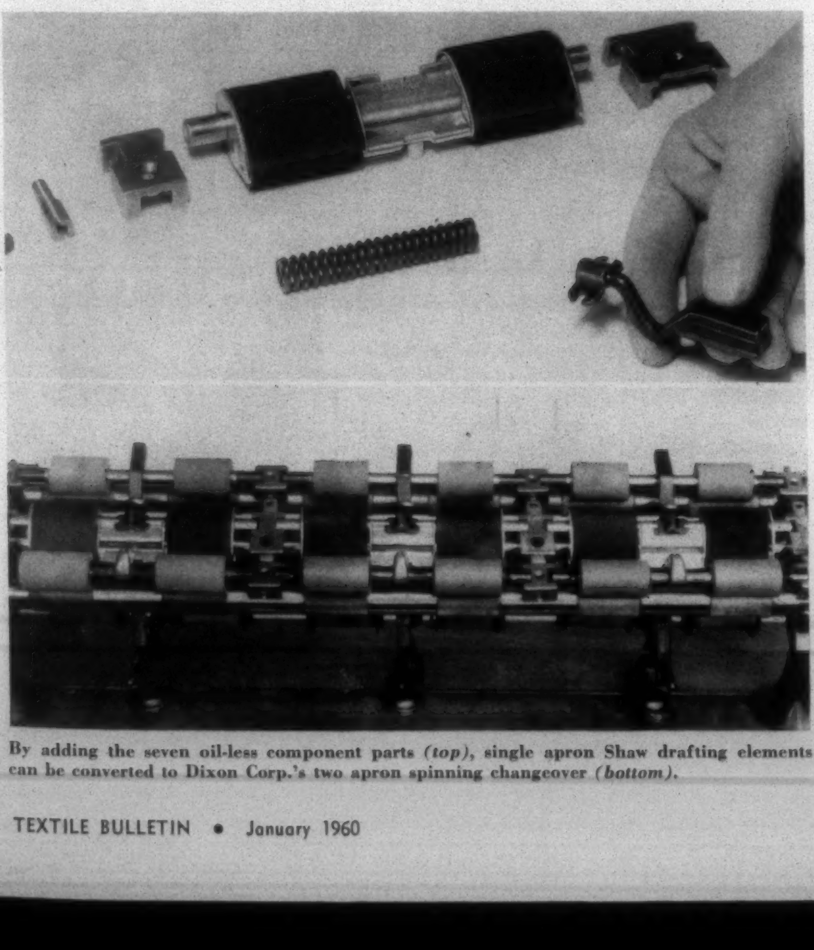
Spinning Aligning System

A new type micro-electric spinning frame aligning system allowing alignment and levelling of rolls and stands on any type drafting system to within plus or minus 0.005 inches without removing or dismantling the drafting system has been announced by F. A. Young Machine Co., Gastonia, N. C. Aligning and levelling may be done with the unit without ungearing the frame in any respect except raising one saddle at each stand.

The new system employs the use of two wires—one stretched directly in front of the front roll and the other directly over the top of the front roll. Then by use of a micrometer with an attached electric light bulb, it is possible to get all the bearings in perfect alignment, Young points out. The micrometer thimble is turned until the spindle touches the wire, thus causing the light to burn. Reading the micrometer serves as a check to assure the fixer that the wire hasn't been bent causing an incorrect reading.



The aligning system consists of a small transformer, two roll stand brackets, two aligning wire reels and a micrometer with an electric light attachment. With the wire stretched from the head to the foot-end, alignment and level is checked with the micrometer. The light comes on when the distance between the wire and the roll has been measured.



By adding the seven oil-less component parts *(top)*, single apron Shaw drafting elements can be converted to Dixon Corp.'s two apron spinning changeover *(bottom)*.

The company reports that since the roll stand bearing should be square with the rolls it has provided a square to check this position.

The ease of use of the simplified system will allow more frequent and less costly aligning and levelling. The importance of frame alignment from a maintenance standpoint is obvious. Other less obvious advantages, however, are: (1) less torque, meaning the load on gears and motor is reduced, making the frame require less power to operate; (2) smoother turning rolls cutting down chatter and vibration; and (3) assurance that all bearings in the line are carrying their share of the load—any stand lower than the two adjacent stands carries a 50% greater load than it would ordinarily.

The procedure for aligning bottom rolls with the micro-electronic system is:

(1) Clamp bracket to head and foot-end stands with vice grip pliers.

(2) Fasten end of wire to head-end stand bracket.

(3) Take reel and let wire unwind and fasten reel to foot-end stand bracket. Do this for wire on front and top of roll.

(4) Using a square see that wire in front of rolls is the same distance from the roll beam at head and foot-end of frame.

(5) Place terminals from power supply (110-volt transformed down to 6-volt; one terminal attached to the wire and the other to some part connected to the bottom roll).

(6) Using the micrometer adjust the wire until it is the same distance from the roll at head and foot-end of the frame.

(7) Adjust stands for line and level

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along the frame until they are the same distance from the wires as the head and foot-end stands. Recommended tolerance is plus or minus 0.005-inch.

(Request Item No. A-2)

Magnetic Tape Transport

A new high-speed magnetic tape transport that is expected to greatly increase the life expectancy of magnetic tapes used with electronic data-processing systems has been introduced by the Datamatic Division of Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

The tape transport, first unit of the new Honeywell 800 transistorized data-processing system to be publicly demonstrated, reads or records information at the rate of 96,000 decimal digits per second. According to the company, the new Honeywell machine using an all-vacuum drive (clutch), as well as vacuum to hold the tape reel on its hub and the tape on the reel, will provide the most gentle tape handling yet achieved by the industry. It is expected to virtually eliminate magnetic tape damage and to substantially increase the efficiency with which it is handled. It is anticipated that the drive will greately increase the life expectancy of tapes and assures the permanence of valuable records that have been reduced to computer language.

(Request Item No. A-3)

Decorative Yarn

A new type of decorative yarn known as Woodtone Mylar has been developed by Metlon Corp., New York City. The yarn simulates the bamboo strips used in woodweaves of all types. It is made only in the color of blond wool.

One of its important uses is in fabrics that simulate woodweaves. Its exceptional strength is necessary for this application. It is also being used for textured drapery fabrics and in sheer curtains.

(Request Item No. A-4)

Printing Polyester Fabrics

Details of what is said to be a revolutionary new process for superior printing of polyester fabrics with disperse dyes, known as the Tanalid process, have been released by Tanatex Chemical Corp., Kearny, N. J.

Extreme fastness to washing, dry cleaning and crocking and elimination of steaming, together with faster continuous printing of premium quality fabrics, are some of the advantages cited for the remarkable new technique.

The heart of the Tanalid process is a new Tanatex product, Tanalid Clear, described as a "dye-weld." In explaining the necessity for the new term, the company said: "The chemical action of Tanalid Clear is totally unlike that of the usual carrier—therefore we had to find a new descriptive word for it." The necessary technique is simple and quick and uses conventional disperse dyes and printing, drying and soaping equipment.

A wide range of both low-priced and premium disperse dyes is suitable for the Tanalid process. Shades from pastels to navies and blacks are readily achieved.

The process consists of preparation of a paste containing Tanalid Clear dye-weld, disperse dye and thickener; printing this paste onto suitably prepared goods, immediate drying by conventional means, and fixation of the print by drying at 300° F., followed by soaping, washing and drying.

Polyesters printed by the Tanalid process are said to have all the qualities to be expected of goods printed with dyestuffs opposed to pigment prints. The fabrics have a softness of hand and clearness of color not obtainable with pigments. In addition, Tanatex reports, production is increased because steaming is eliminated. Continuous, top quality printing by the Tanalid process is said to be more rapid on polyesters than conventional printing on other synthetics, and even natural fiber fabrics.

(Request Item No. A-5)

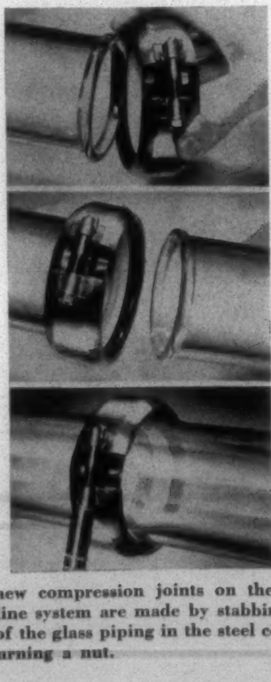
Pyrex Drainline

A new lightweight glass drainline system featuring simple, one-piece couplings for making quick, permanent compression joints has been introduced by Corning Glass Works, Corning, N. Y., for disposal of chemical wastes.

The drainline has been engineered to cut installation time and cost, and eliminate failure because of corrosion or joint leakage. The company says the system is designed for vertical or horizontal mounting and can be buried in the ground.

Corning reports that it is guaranteeing the line against breakdown by corrosion or joint leakage for the lifetime of the building in which it has been installed.

Trademarked Pyrex, the piping and fittings are made of hard, low expansion borosilicate glass that is said to be resistant



The new compression joints on the Pyrex drainline system are made by stabbing both ends of the glass piping in the steel coupling and turning a nut.

to virtually all corrosives. Only massive quantities of hydrofluoric acid and hot alkalies measurably affect the material, the company said.

The coupling consists of a stainless steel shell, a rubber sleeve, and a liner of Teflon 100-X, a material that is said to be as corrosion-resistant as the glass. With the new coupling, the joint is made by stabbing both ends of the glass pipe into the coupling and turning a single nut.

A new lighter weight pipe is being offered for above-ground installation. A 1½" diameter section of this pipe weighs only 0.64 lb. per foot. Regular weight glass piping is available for burial in the ground. The line also can be set in concrete, or inside any trough or sleeve.

The ends of each section of piping are beaded. The coupling is designed to accommodate this bead. Corning reports that this combination contributes to the reliability of the joint. The drainline system is being offered to handle working pressures up to 15 p.s.i.g. and temperature to 250° F. Standard pipe lengths of 5 and 10' are available. Diameters range from 1½ to 6".

A 12-page bulletin, PE-20, describing the new drainline is available from the Corning Co. (Request Item No. A-6)

New Nylon Yarn

The Du Pont Co.'s textile fibers department has begun production of a new multifilament nylon yarn which is characterized by a non-round cross section. This new yarn will be introduced under its own name to distinguish it from regular Du Pont nylon. The new nylon yarn differs from regular Du Pont nylon yarn in that many fabrics made from it are said to have a distinctive dry hand, improved cover, unusual surface appearance, and improved print definition and clarity. Other qualities of this new nylon, such as drape, dyeability, and wash-and-wear properties, are comparable to those of the regular Du Pont nylon.

This new combination of qualities is expected by Du Pont to lead to the use of the yarn in a wide range of apparel end uses, including women's dresses, blouses, lingerie, foundation garments, and shell fabrics for men's outer jackets. The yarn is a premium product addition to Du Pont's line of regular nylon yarn. It is available in limited poundages in the following deniers: 30 denier, 10 filament, semi-dull, $2.46 per pound; 40 denier, 13 filament, semi-dull, $2.11; 40 denier, 13 filament, dull, $2.16; 70 denier, 34 filament, semi-dull, $1.81; and 200 denier, 34 filament, semi-dull, $1.54. These prices are five to ten cents above those of comparable yarns of the regular nylon.

(Request Item No. A-7)

Electronic Batch Counter

Standard Instrument Corp. of New York City has announced the re-design of its electronic batch counter, Tally-Count. In its present form, Tally-Count is said to serve as a complete materials handling instrument, suitable for all types of batch counting, machine cycling and packaging operations.

The new Tally-Count is available with a wide range of plug-in sensing devices. Among these are:

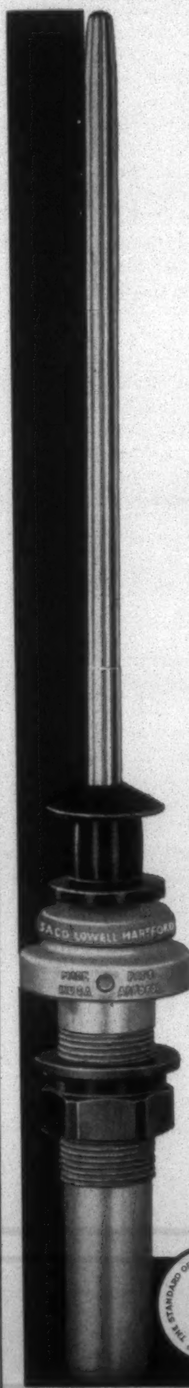
—Warning pre-sets. Double and triple pre-set decades furnish warning signals before final count is reached. These decades may be pre-set to decelerate a motor, for example, to prevent the abrupt stop of a high-speed operation.

—Photoelectric amplifiers, which plug in as an integral part of the Tally-Count chassis. These amplifiers convert photoelectric signals into counting pulses at speeds of up to 100 per second.

—Photoelectric sensing units, which count and inspect production parts without contacting the material controlled.

—Footage-yardage counter for accurate, high-speed control of material length in applications such as weaving. This counter operates by riding a wheel on the surface of the material. Built-in photoelectric eye feeds counting signals to Tally-Count, permitting accurate cut-off at any desired length.

In addition to these plug-in accessories, Tally-Count offers a number of new operating advantages: (1) remote control operation—additional relays in power chassis permit count re-set or control relay release through remote switches, even at extreme distances; (2) greater counting capacity—



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1. More yarn on the bobbin due to tighter wind resulting from more uniform tension
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. . . to carry today's heavy laps without bending out of shape.

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addition of a fifth decade increases Tally-Count's batch counting capacity to 100,000; (3) automatic zero set — counting tubes automatically set to zero with application of power, insuring a complete batch count from the very start of the operation.
(Request Item No. A-8)

Conveyor Routing System

A new automatic conveyor routing system has been announced by Atronic Products Inc., Bala-Cynwyd, Pa. The Model 450 System automatically directs tote boxes, cardboard cartons and other containers to selected stations on a conveyor line. The automatic routing system can be used to direct containers to packing stations for broken lot order assembly, or to direct work through various processing stations.

Extreme flexibility is said to permit either single containers or trains of containers to be handled. It is specially designed so that the container can be diverted at any station, processed, placed back on the conveyor and diverted again at another station for further processing.

The routing system is controlled by a dispatcher at the control console. He selects the routes by depressing station keys and the coded instructions are automatically placed on the container by an inking printer. Code reading carton selectors control the direction of flow. If the container is to be re-used, the code may be automatically removed by optional equipment following the last station. (Request Item No. A-9)

pH Meter

Analytical Measurements Inc., Chatham, N. J., has introduced a big scale line-operated pH meter with analytical pH probe unit. The instrument is said to combine a big scale in a compact housing requiring minimum bench space. It is said to be completely portable and therefore usable wherever there is an a.c. outlet. The unit utilizes an electronically modulated amplifier with printed circuitry.
(Request Item No. A-10)

Carpet Nylon

The Chemstrand Corp., New York City, has announced the development of a new exclusive process for texturing continuous filament nylon yarn for carpets. Simultaneously, the company revealed that carpets made of the new yarn, which will be identified as Cumuloft, will be introduced in January by Mohawk Carpet Mills, Amsterdam, N. Y., and Alexander Smith, New York City.

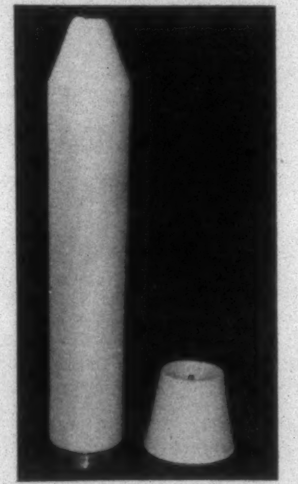
Carpets made of Cumuloft nylon yarn will be manufactured under a licensing agreement which establishes rigid quality standards based upon specific weight of the yarn for each yard of carpet. In accordance with the standards, the carpets must be made with a face of 100% of the new textured filament nylon yarn.

According to Chemstrand, carpets made with its new Cumuloft nylon yarn offer maximum wear with minimum care, excellent color range and clarity, have superior loft and are non-shedding, easy to clean and non-pilling.

Chemstrand's Cumuloft is a continuous filament textured nylon yarn. It has a modified cross-section with a built-in crimp with rounded corners which are said to give it new dimensions of depth and breadth heretofore impossible to achieve in nylon yarns.

To launch carpets made of its new textured Cumuloft nylon filament yarn, Chemstrand has scheduled a major advertising drive including trade publications, consumer magazines and local newspapers as well as a complete merchandising and promotion program at the retail level.
(Request Item No. A-11)

Giant Yarn Package



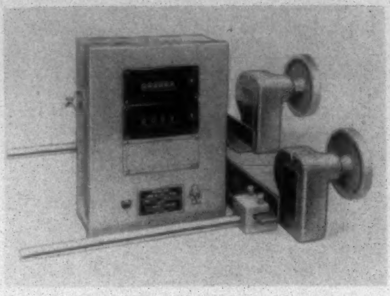
A new type of giant yarn package has been introduced in the U. S. by the Interstate Textile Equipment Co. of Charlotte, N. C. The Delerue Rocket Winder recently developed and produced by D. Delerue & Co. of Roubaix, France, produces a coreless package that can be made in almost any length up to 30", and weighing approximately 9 lbs., depending upon the type of yarns that are wound. It is stated that the winder is suitable for practically all counts of cotton, woolen and worsted yarns, as well as synthetic fibers. The giant packages can be used for dyeing, circular knitting, as well as flat knitting, shuttleless weaving, warping, pirn and cop winding.

Dyeing plants using this type Rocket were able to get uniform color throughout the package because of the even density of the package, making identical penetration of the dye liquor possible over the entire length, according to Interstate. Because of the patented method of the crossing motion, ribbon effects are reportedly eliminated. Furthermore, it is possible to increase production up to 60% with the same dyeing equipment, Interstate reports.

In addition to the advantages claimed for dyeing, it is not necessary to rewind the yarn after dyeing, since the same package can be used in subsequent processes. The Delerue Rocket Winder is manufactured in six-spindle units, and is available with a variety of attachments, depending upon the ultimate use of the package, type of yarn to be wound and other requirements of the individual users.

(Request Item No. A-12)

Shrink And Stretch Meter



A new shrink and stretch meter which is accurate within .2% has been announced by B. F. Perkins & Son, Holyoke, Mass. By reading the two figures on the meter, it is said to be possible, without slowing down or stopping production, to determine the amount of loss or gain which takes place in material during various processes and to make corrections accordingly. At web speeds of 250 yards-per-minute or less, readings are automatically taken on any 1,000 feet. At web speeds up to 500 yards-per-minute readings are taken on any 1,000 yards of material going through the process.

(Request Item No. A-13)

Anti-Bacteria Agent

A bacteria-fighting spray has been developed for the purpose of providing long-lasting germ protection to garments, rugs, drapes, upholstery and other textile items. The new spray—called Eversan SP—will be on the market by next Spring. Developed by Ions Exchange & Chemical Corp., New York City., it is handled by Yardney Chemix Corp., New York City.

This permanent germ-protection is the spray-on version of the new antibacterial textile treatment, Eversan. Used widely in a number of mills, and finishing and manufacturing plants, Eversan is said to be a laboratory-proven and government-registered permanent fabric bacteriostat.

Unlike surface-purifying treatments, Eversan is said to become a part of the fabric—whether cotton, wool, nylon or other synthetics. It is said to retain its antibacterial efficiency for the lifetime of the article, even through cold, warm, or near-boiling water washes, with detergents or bleaches and through dry cleanings. It won't stain, and is completely colorless, odorless and non-toxic, according to the company. Eversan products are said to fight mildew-causing and perspiration-decomposing bacteria.

(Request Item No. A-14)

Fork Truck

A 2,500-lb. capacity gas-powered fork truck has been added to the Clarklift line of fork-lift trucks produced by the industrial truck division of Clark Equipment Co., Battle Creek, Mich. Named the C-25, the unit has cushion tires and is designed for indoor handling and tiering.

Engineered for operations in compact areas, the unit has a turning radius of 64" and is said to require an aisle only 75" wide, plus load length, for right angle stacking. It will travel 8 m.p.h. both forward and reverse and will climb a 23% grade loaded. With a standard upright it has a lift speed of 75 feet-per-minute loaded and a lowering speed of 80 feet-per-minute loaded. A Hi-Lo upright is available optionally.

Lift-lower controls and forward-reverse controls are mounted on the steering column within fingertip reach of the operator. The truck may be mounted conventionally from either side, and the driver's foam rubber seat is adjustable forward and backward.

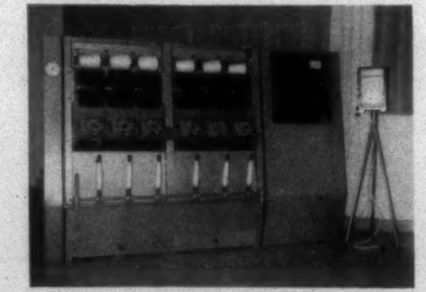
The C-25 is powered by a 4-cylinder Continental gas engine of 112 cubic inch displacement coupled with an automatic Hydrotork Drive transmission and Clark torque converter. Final gear reduction is at the drive wheels to reduce axle shaft windup.

Maintenance features of the truck include hydraulic brakes which are self-adjusting for the life of the lining, a split hood which swings up and out to completely expose the engine compartment, and a swing-out battery tray.

The standard Clarklift upright, a nested roller type, is used on the machine. Thrust rollers insure maximum stability and prevent upright spread. The hydraulic system is protected by a flow regulator to control lowering speeds. Dimensions of the C-25 are: length 71¾"; width, 32"; wheelbase, 44"; weight, 4,800 lbs.

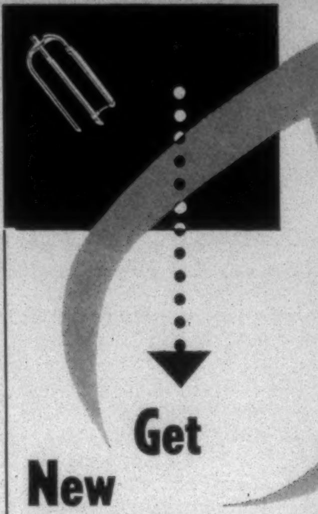
(Request Item No. A-15)

Electronic Yarn Evaluator



The Qualitester is a new electronic testing instrument that detects, counts, and actually shows abnormal variations such as slubs, excessive trash, some types of drafting defects and other imperfections. At the same time, the device is said to measure and report averages of the extreme normal variations. The unit consists of: (1) a six-spindle variable speed winding machine; (2) a capacitance detector and cutting mechanism for each spindle; (3) two control panels; and (4) a recorder for the output voltage of the measuring amplifier.

The tester was developed to give a rapid evaluation of yarn quality with respect to regularity and yarn defects, according to Thomason Textile Service, American sales agent for the device which is built by Qualitex N. V., Enschede, Holland. Winding speeds up to 800 y.p.m., a total of



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Pressers blocked with proper curve and balance . . . or replaced

Flyers reblocked

Spindles rebuilt or replaced

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. . . PLUS Selecto-Speed* Balancing for smooth running at all speeds.

Let us give you full information and prices.

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Continuous Service to Textile Mills Since 1925

4,800 y.p.m. for all spindles, are run on the tester. Tested yarn is not damaged and can reportedly be returned to normal production.

The instrument counts and segregates into four classes, defects, slubs, and other imperfections. These classes are generally said to be: (1) neps and very small seed particles or slubs; (2) seed particles, small slubs, fly, drafting defects and imperfections; (3) slubs and imperfections larger than in Class 1 and 2; and (4) largest slubs and imperfections. In most cases, Class 1 and 2 imperfections come from the cotton or card room. Class 3 and 4 imperfections generally come from the spinning room.

Imperfections can be cut out of the yarn if so desired by means of a cutting mechanism on each spindle. Even if cut out, imperfections will continue to be counted.

Uses for test results are said to include aid in elimination of sources of slubs and imperfections, control of comber noil percentage, evaluation of cotton quality, effectiveness of cleaning and preparatory equipment, and effectiveness of slub catchers on winders. Qualitester results can also be used to predict ends-down in spinning, spooler and winder stops and loom efficiency, according to Thomason.

For the yarn purchaser, the tester will reportedly give rapid sample testing during buying negotiations and will give an actual comparison between incoming shipments and standards.

In operation, the tester has a capacitance gauging head determining continuously the mass of the yarn elements passing through the measuring condenser. Normal as well as abnormal mass variations show up in the form of a varying electrical signal. A computor unit separates the two "pictures" contained in the electrical signal and directs them into different channels for further evaluation. The first channel produces an output voltage which is determined by the magnitude of the normal variations. The second output consists of impulses proportional to the magnitude of the neps or slubs. If no fault is present this output signal equals zero. Both signals are compared to each other resulting in: (1) the separation between usual and unusual is sharply defined; (2) because both signals originate from one detector and are later compared, their absolute magnitude is unimportant but their ratio is essential. This ratio is not influenced by variations in amplification of the detector and a very high stability is reached automatically.

(Request Item No. A-16)

Carpet Orlon

The production of a newly developed form of Orlon acrylic fiber, engineered for use exclusively in carpets, has been announced by The Du Pont Co.'s textile fibers department. The new staple carpet fiber is called Orlon Type 37 fiber. Carpets containing Orlon Type 37 fiber are being introduced in January at the International Home Furnishings Market in Chicago by C. H. Masland & Sons, Carlisle, Pa., and Alexander Smith Co. Initial carpets by Masland will contain Orlon Type 37 fiber in blends with wool. Carpets by Smith will have the new fiber blended with modacrylics.

Performance tests are said to have shown that the new fiber has more durability, easier cleanability, and better resistance to crushing and matting than most carpet fibers. Aesthetically, the new acrylic's most important characteristic is a natural whiteness which gives superior clarity of color with excellent lightfastness properties. Other aesthetic qualities of importance to ultimate consumers include increased bulk and resilience, compared with most carpet fibers.

A rigid quality control program will be established by Du Pont in co-operation with the mills. Labels will be issued for carpets meeting required Du Pont specifications. They will be designed to help consumers identify carpets containing Orlon Type 37 fiber and to enable retailers to co-ordinate their promotions with Du Pont's advertising support of the new product.

(Request Item No. A-17)

Irgalan Brown

Irgalan Brown GRL, an addition to Geigy's Irgalan range of neutral-dyeing premetalized colors, has been announced by the Geigy Dyestuffs Division of the Geigy Chemical Corp., Ardsley, N. Y. Geigy recommends its use on wool, nylon or silk, and lists the following characteristics for it:

(1) Excellent fastness to light, even in pale shades on nylon.

(2) Gives a reddish and lively cast in artificial light.

(3) A very pleasing shade of brown is provided which is suitable as a base for a wide variety of browns.

(4) The dye makes processing economies possible, with short dyeing cycles.

(5) Good solubility which is applicable in all types of dyeing equipment.

(Request Item No. A-18)

Yarn Balance

The Mettler Instrument Corp., Hightstown, N. J., has introduced a new yarn balance for determining denier, cotton yarn number or tex-units. The unit has a total of 1,000 scale divisions allowing for a ten-gram reading. It has three engravings on the same optic. These three are graduated in grams, cotton yarn number and tex-units. Denier is determined by using a 9,000 meter sample and reading the gram scale which will then equal denier.

The yarn number engraving is designed to give a direct reading in the cotton yarn number. The unit will weigh cotton yarn numbers from 200 to 6.5. A special optical engraving allows users to compare tex-units and cotton yarn number. The readings in tex-units are from 0 to 91 with a precision of ± 1/100.

(Request Item No. A-19)

Optical Whitener

Leucophor ACR, a new optical whitener for resin treated goods, has been developed by the chemical division of Sandoz Inc., New York City. The product's improvements in resin bath stability, non-tailing, and retention of whiteness after laundering were demonstrated in finishing plant runs and by laboratory test data, Sandoz reports.

Leucophor ACR is for application with acid catalyzed resins. Stable to acid and to metallic salts, under acid conditions, Leucophor ACR is anionic in character and is compatible with anionic and non-ionic compounds.

Stability to zinc nitrate is said to be a unique feature of Leucophor ACR. The brightener may be added before or after addition of the catalyst, without danger of precipitation in the bath.

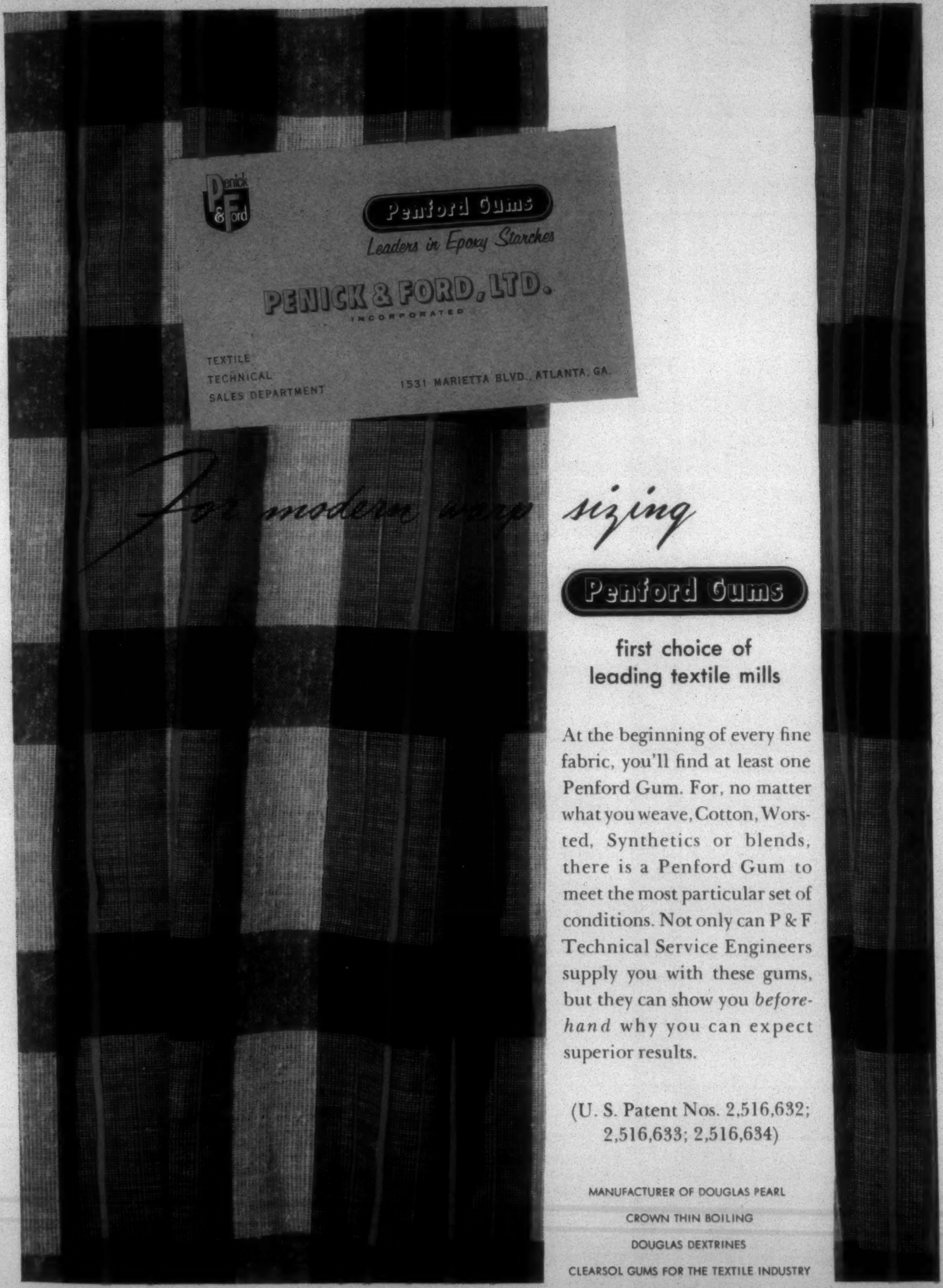
Freedom from tailing-off was proved by a rigorous mill test, the chemical division reports. A run of cloth was padded until liquor in the box had been exhausted. No additions were made. Brightness tests, taken at 2' intervals over the entire length of the cloth, showed that whiteness at the beginning of the run was maintained uniformly throughout the entire length of the goods. The treated goods are said to be fast to A.A.T.C.C. No. 4 wash test and prove free from yellowing by elevated temperatures. (Request Item No. A-20)

Thermistor Psychrometer

A portable thermistor psychrometer that is said to accurately measure the moisture content of air by means of wet and dry thermistor beads in a matter of seconds, has been introduced by Atkins Technical Inc., Cleveland, Ohio. Called A+Hydrophil, the portability and extremely rapid response features of the pistol-like instrument are said to make it ideal for air moisture determination in textile mills.

Battery operated, the instrument is reported to be completely mobile and is ideal for determining the relative humidity of the air at all desired points of a room in swift sequences such as near the ceiling, floor or side walls, in changing air currents, and in closed spaces such as drying ovens and piping accessible only by a small hole into which an extension piece of the suction tube (barrel) can be fitted. Very little air is required for a reading as the heat capacity of the tiny instrument is minute. This instrument has three scales for measuring humidity in temperatures ranging from 10° F. to 176° F. (or 10° to 80° C.). Accuracy is within 0.5% of relative humidity and readability within ¼° F.

The A+Hydrophil is said to be extremely easy to use. You press one trigger button and read the dry air temperature imme-



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TECHNICAL
SALES DEPARTMENT

1531 MARIETTA BLVD., ATLANTA, GA.

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At the beginning of every fine fabric, you'll find at least one Penford Gum. For, no matter what you weave, Cotton, Worsted, Synthetics or blends, there is a Penford Gum to meet the most particular set of conditions. Not only can P & F Technical Service Engineers supply you with these gums, but they can show you *beforehand* why you can expect superior results.

(U. S. Patent Nos. 2,516,632; 2,516,633; 2,516,634)

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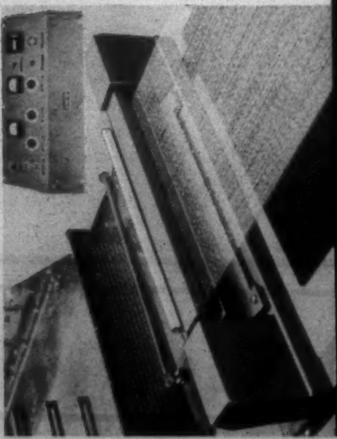


- AUTOMATICALLY DETECTS DEFECTS IN YARN DURING WARPING
- ELECTRICALLY COUNTS DEFECTS ABOVE PRE-SELECTED SIZE
- FOR COTTON — WOOL — AND SYNTHETIC YARNS
- STOPS WARPER FOR REMOVAL OF OBJECTIONAL DEFECTS
- FAIL-SAFE CONTROL INSURES CONSTANT SENSITIVITY
- DETECTS DEFECTS AS SMALL AS A SINGLE BROKEN FILAMENT

The Fabrionics Warp Yarn Monitor is an electronically controlled monitoring device which automatically detects imperfections in yarn above a pre-selected magnitude, simultaneously counts them and stops the warper to permit their removal. The Liner Discriminator model detects and differentiates *length* as well as *diameter* defects.

The Warp Yarn Monitor is placed to the rear of a warper at which point the yarn is condensed into a flat sheet and it is drawn over alsimag or hard chrome plated steel rods and photo-electrically inspected.

NOTE: Free literature and complete catalog on quality control instruments and devices are offered by the Fabrionics Corporation. Write to the FABRIONICS CORPORATION, P.O. Box 521, Dept. H, Huntington, L. I., New York. *Patent Pending*

Fabrionics

FABRIONICS WARP YARN MONITOR

diately; then push another button to read the wet bulb temperature. Both readings are made in less than ten seconds and the relative air humidity is quickly read from a conventional psychromatic chart or slide rule. (Request Item No. A-21)

Temperature Test Chamber

A new apparatus facilitating the study of fabrics at extreme temperatures has been announced by Fabric Research Laboratories, Dedham, Mass. Called the FRL Extreme Temperature Test Chamber, the new appartus is designed principally for use with Instron tensile testing instruments and makes possible tensile and compressional tests at a temperature range from —95° F. to +1,000° F.

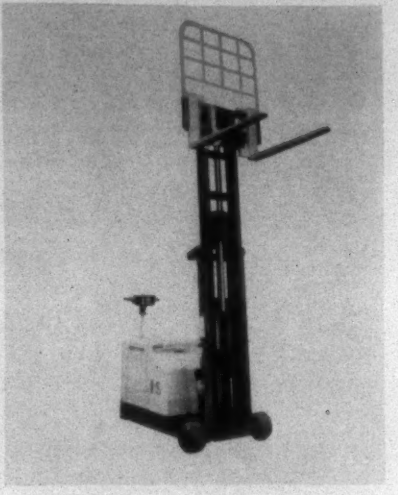
The FRL chamber, in conjunction with the Instron, permits the use of most normal jaws and allows for tensile testing of ten-inch samples with up to 80% rupture extension. Precise control over the full temperature range is ± 1° F. to 2° F.

The chamber is not limited, however, to Instron applications. Self-contained on a rollaway carriage, it can be used independently as an oven or cold chamber, with working space of about 3,000 cubic inches dimensioned 12" x 9.5" x 26". Special chambers can also be constructed with larger dimensions.

The chamber is built under license from FRL by Custom Scientific Instruments Inc., Kearny, N. J. It can be constructed with varying temperature ranges conforming to purchaser's specifications and is reported to be relatively inexpensive even at its full temperature capacity.

(Request Item No. A-22)

Jackstacker



A new low silhouette, counterbalanced jackstacker designed with heavy duty 24-volt power and said to offer greater working visibility for the operator has been introduced by Lewis-Shepard Products Inc., Watertown, Mass. Powered by a 24-volt industrial battery and designed with heavy duty 24-volt components throughout, this model provides a low silhouette design that is said to give the operator clear visibility to the forks and to permit him to ride this truck by sitting on the battery compartment. (Request Item No. A-23)

For the Mill Bookshelf

Storage Tubes

Sonoco Products Co., Hartsville, S. C., has published a 4-page bulletin describing its storage tubes for rugs, carpeting, garment material, upholstery fabrics, etc. The tubes are available in sizes up to 36" internal diameter. They can be worked with fork trucks, overhead hoists or manually.

A low cost storage system which provides protection and instant location of goods is said to be provided by the use of the tubes. The cost is said to be from 5 to 8 times less than that of wood or metal racks.

(Request Item No. A-24)

Valve Catalog

A newly revised version of its comprehensive 500-page valve catalog, Catalog '60, is available from the Lunkenheimer Co., Cincinnati, Ohio, manufacturers of industrial valves and lubricating devices. The catalog features a special 24-page valve selector and over 100 pages of engineering data. In addition, the complete line of steel, iron, bronze and PVC valves is presented, along with specifications and illustrations on lubricating devices, boiler mountings, cocks and other products. Chief new items since the last catalog are complete specifications on LQ600 bronze globe valves, Luncor PVC valves, and Lunkenheimer forged steel gate valves. (Request Item No. A-25)

Textile Chemicals

A new 44-page booklet, describing more than a hundred chemicals for the textile industry, has been published by Union Carbide Chemicals Co., division of Union Carbide Corp., New York City. The booklet contains application, formulation and physical property data for textile chemicals used in 41 textile processing operations. Applications discussed in detail in the booklet are: adhesives for bonded fabrics; aftertreating agents for dyeing; anti-creasing agent intermediates; anti-foaming agents; anti-fume agents; anti-slip finishing agents; anti-static agents; bleaching assistants; carbonizing agents and assistants; conditioners; corrosion inhibitors; detergents and assistants; dispersing agents; dyeing assistants;

emulsifying agents and assistants; fiber synthesis and modification agents; finishing agents; fumigants; kier-boiling assistants; lubricants, mercerizing assistants; mildew preventives; mordants; plasticizers for flexible sizes, coatings, and finishes; printing assistants; reducing agents; resin intermediates; resists; sequestrant intermediates; shrinkage control agents; sizing agents; softeners; scouring agents; stiffeners; stripping agents; thickeners; warp sizes; water repellents and ingredients; and wetting agents. (Request Item No. A-26)

Leak-Proof Pumps

Fostoria Corp., Huntingdon Valley, Pa., has published a new 4-page, 2-color Chempump Bulletin 1100 describing complete line of seal-less pumps for leak-proof pumping. The bulletin covers design, operation and selection of the proper "canned" pump. Chempump seal-less pumps are said to eliminate costly leakage by combining pump and motor in a single leak-proof unit. The line includes units for system pressures up to 500 p.s.i. and temperatures ranging from cryogenic regions to over 1,000° F. (Request Item No. A-27)

Safety Posters

A series of 16 new safety posters with the theme "Think Safety!" is available from the Automatic Transportation Co., Chicago, Ill., manufacturer of electric-driven industrial trucks. The posters illustrate how accidents involving fork trucks occur and how to prevent them. Each poster is designed to emphasize the importance of safe driving practices by fork truck operators, in order to prevent injury to himself, plant personnel or damage to the material being transported, plant equipment and the truck. The posters measure 11" x 17". (Request Item No. A-28)

Electronic Solution Controller

A 4-page bulletin describing its new electronic solution controller is available from Electro Mechanisms Corp., Skokie, Ill. The bulletin describes automatic control of concentration of caustic, acidic or aqueous solutions in either continuous or batch-type metal washing equipment, plating processes, chemical process systems, textile bath equipment, and other applications where precise concentrate levels must be maintained. Also described are system components: sensing electrode, magnetic amplifier, pump assembly, wash tank and holding tank. (Request Item No. A-29)

Hydroxyethyl Cellulose

A new 16-page booklet, describing the properties and uses of Cellosize hydroxyethyl cellulose, has been published by Union Carbide Chemicals Co., division of Union Carbide Corp., New York City.

The booklet contains extensive data on properties, preparation of solutions, film and coating properties, preparation of water-insoluble films, applications, toxicological properties, specification limits, shipping data and test methods. Cellosize hydroxyethyl cellulose is a nonionic synthetic colloid that is said to be readily soluble in hot or cold water. It has excellent tolerance for dissolved electrolytes. It can be used as a thickener, binder, stabilizer, protective colloid, film-former or coating. (Request Item No. A-30)

Maintenance Cleaning

"A Guide to More Efficient Cleaning in the Textile Industry" is the title of a new booklet recently published by Oakite Products Inc., New York City, manufacturer of industrial cleaning compounds and equipment.

The 8-page booklet, which is illustrated by photographs of cleaning operations, discusses plant-proved procedures for cleaning looms with solvent detergents applied through spray equipment; cleaning and derusting reeds; hot tank cleaning of loom and machine heads; steam cleaning of dye kettles and acidic treatment of dye boxes; removal of heavy deposits from tenter chains and slasher drums; cleaning synthetic fiber processing equipment; and regular maintenance of floors of every type. The maintenance of air-conditioning equipment is discussed and materials recommended for the control of algae and slime. (Request Item No. A-31)

Sterox 21-K

Monsanto Chemical Co.'s inorganic chemicals division has announced the publication of a technical bulletin on the use of Sterox 21-K for fulling and scouring of wool and wool-blend fabrics.

Use of the product, Monsanto said, cuts total chemical and processing costs, reduces handling and storage problems and results in improved quality of goods. The bulletin, No. I-179, gives performance comparisons of Sterox 21-K with other methods of wool fulling and scouring, contains recommended use procedures and includes a description of the physical and chemical properties of the product. (Request Item No. A-32)

Shaft Seal

Information and engineering data on a new corrosive service shaft seal made from Du Pont Teflon are contained in a bulletin recently published by Crane Packing Co., Morton Grove, Pa. The seal is designed to handle all concentrations of acids and salts, strong oxidizing or reducing agents and all organic compounds. These include sulphuric acid, nitric acid, phosphoric acid and similar fluids. A bellows type construction is said to make it especially suited for many slurry applications because it eliminates improper seal operation due to slurry build-up along the pump shaft. This design also allows maximum seal axial flexibility to compensate for pump shaft runout.

The new seal is made of Teflon construction in all areas that contact the liquid or gas, Crane reports. The bellows is of virgin Teflon and is molded and sintered to a sealing washer of glass-filled Teflon. The spring is covered with a Teflon sleeve which is covered at both ends. This is said to assure complete corrosion resistance under practically all circumstances. The only other metal member is a heavy clamp ring which, in most applications, is located outside the pump and, therefore, not in contact with the liquid handled.

Known as the Type 20, it is available in two single face types, one for internal and the other for external mounting, depending upon the application. A double face type is also available for internal mounting only. Shaft sizes range from ⅝" to 3". Seal size and operating temperatures determine the maximum operating pressure. For example, a ¾" seal will withstand 45 p.s.i. at 250° F. to 150 p.s.i. at 70° F.; and a 3" seal, 15 p.s.i. at 250° F. to 80 p.s.i. at 70° F. (Request Item No. A-33)

Work Gloves

A broad line of coated fabric work gloves for industrial hand protection is described in Bulletin No. 1315-I recently issued by Mine Safety Appliances Co., Pittsburgh, Pa. The 4-page folder illustrates basic types of glove materials available, including neoprene, natural rubber, and vinyl plastic in standard, flexible, and super-flexible styles. Glove linings are listed as jersey, canton flannel and interlock fabric.

Included in the bulletin is a chart evaluating the chemical resistance of glove materials to a wide variety of acids, caustics, ketones, hydrocarbons, and solvents. Specific industrial applications for each type of gloves are also provided. (Request Item No. A-34)

Organic Chemicals

A new 28-page physical properties booklet, describing more than 400 synthetic organic chemicals, has been published by Union Carbide Chemicals Co., division of Union Carbide Corp., New York City.

The booklet contains information on applications, physical properties, and shipping data. Included are alcohols; acids, anhydrides; chlorine compounds; esters; ethers and oxides; glycol-ethers; glycols and triols; ketones; monomers; Carbowax polyethylene glycols; metallic salts; nitrogen compounds; cyclic compounds; Flexol plasticizers; polypropylene glycols; Ucon fluids, lubricants, and fluorocarbons; Tergitol surfactants; Polyox water-soluble resins; Cellosize hydroxyethyl cellulose; new chemicals for evaluation; and chemicals for special applications. (Request Item No. A-35)

Refracolor Gages

New Data Unit No. 360, recently published by Jerguson Gage & Valve Co., Burlington, Mass., gives features and technical data on new Jerguson Refracolor gages. These gages, designed for high pressure installations, clearly show the water level as green, while the steam area shows red. The special design is said to require very little maintenance and to make servicing easy. (Request Item No. A-36)

Serving The Textile Industry

Atlanta Belting Co. Moves To New Location

The Atlanta Belting Co. has moved into its new building at 560 Edgewood Ave., N. E., in Atlanta. The new location is 10 blocks from the heart of downtown Atlanta. The firm was formerly located at 508-510 Whiteball St., S. W., for 28 years. Atlanta Belting has been in business for 36 years and is presently headed by Ernest D. Day Sr.

Cluett, Peabody Develops Wash-And-Wear Standards

Dowling, Alford

Robert M. Dowling, vice-president of Cluett, Peabody & Co.'s Sanforized Division, and Ben A. Alford, director of licensee services, discuss the operation of the new Smoothness Evaluator. The electronic test instrument is the central feature of the company's new wash-and-wear control program.

A new electronic test instrument which is said to make possible an exact wash-and-wear performance standard by rating the appearance of fabrics with an electric eye was unveiled recently by Robert M. Dowling, vice-president of Cluett, Peabody & Co., who heads the company's Sanforized Division.

Developed by Sanforized engineers after three years of research, the instrument, called a Smoothness Evaluator, is the central feature of a new wash-and-wear quality control program which the company has developed for the textile industry.

Under the new quality control program, standards have been set up for five properties of a wash-and-wear fabric. They are: smoothness after washing as measured by the Smoothness Evaluator, crease resistance, shrinkage, tensile and tear strength. A new trademark, Sanforized-Plus, has been created to identify fabrics approved by the Sanforized Research Laboratories, which meet the standards and conform to the test requirements. The latter include continuous testing at the finishing plant level.

Opportunity to use the new test instrument and the new trademark is being offered to all fabric finishers now licensed to use the "Sanforized" trademark. To insure adequate servicing, the quality control program is being undertaken initially in plants finishing the medium to heavyweight fabrics used in men's and women's sportswear, slacks and utility wear. It will be extended to plants finishing lighter weight fabrics in the near future.

Celanese Corp. Acquires Plastic Bottle Firm

Celanese Corp. of America has announced acquisition of Royal Mfg. Co., one of the nation's large independent manufacturers of plastic bottles and containers for cosmetics, household specialties, bleach, liquid detergents and similar products.

Richard W. KixMiller, president of Celanese Plastics Co., said that the major growth potential for the entire field of blow-molded "carry-out" plastic containers dictates immediate expansion of Royal facilities to serve nation-wide markets. The expansion will take the form of increasing the capacity of Royal's plants at Prescott, Ariz., and Chicago, Ill., and starting operation of a new plant on the East Coast. Celanese has located a site in an Eastern metropolitan area and plans call for installation of equipment to be completed and production started by April.

The container industry represents a potential market of a quarter of a billion pounds a year for linear polyethylene, an important Celanese plastic which is produced under the trademark of Fortiflex. Celanese is a leading producer of linear polyethylene, having pioneered its commercial introduction nearly three years ago.

Chemstrand Seeks Labor For Greenwood, S. C., Plant

The Chemstrand Corp. is recruiting employees for its multi-million dollar nylon plant in Greenwood, S. C. Applications for jobs are being accepted through the S. C. Employment Bureau, according to Robert L. Grainer, plant manager. The plant will have four shifts and will operate 24 hours a day, five days a week. It is located on a 1,400-acre site adjoining Lake Greenwood. Upon completion it will have more than 3½ acres under one roof.

Eastman Chemical Ups Dye Prices

An increase in the price of ten of its dispersed dyes for synthetic textile fibers has been announced by Eastman Chemical Products Inc., Kingsport, Tenn., subsidiary of Eastman Kodak Co. The new prices will go into effect January 1, 1960.

"While the cost of raw materials, labor and freight have risen sharply during the past three years," an Eastman spokesman pointed out, "this is the first increase involving more than one or two of our dyes since 1957."

Increases will range from 4 cents per lb. for Eastone Rubine R to 39 cents per lb. for Eastman Yellow 5G, conc. Other dyes included in the list are Eastman Blue BNN and Eastman Black SN.

The list of dyes and price increases are as follows: Eastone Yellow GN, conc.—from $2.08 to $2.18; Eastone Yellow 5G, conc.—from $3.65 to $3.94; Eastman Orange GRN, conc.—from $1.70 to $1.84; Eastone Rubine R—from $1.32 to $1.36; Eastone Scarlet BG—from $1.70 to $1.79; Eastman Fast Violet 5RLF—from $4.54 to $4.76; Eastman Black SN—from $1.05 to $1.13; Eastman Polyester Diazo Black B—from $.89 to $.96; Eastman Blue GBN—from $1.65 to $1.78; and Eastman Blue BNN—from $1.65 to $1.78.

English Machinery Firm Plans U. S. Organization

Hobourn Aero Components Ltd. of Rochester, England, will establish at Spartanburg, S. C., an organization to sell and service textured yarn processing machinery. Brian M. Lyttle will be in charge of the organization. Hobourn has been associated with Deering Milliken Corp. for the past two years in development of the Agilon yarn process.

Southern Dyestuff Plans Building At Mt. Holly, N. C.

Southern Dyestuff Co., a division of American-Marietta Corp., Chicago, Ill., plans to build a $350,000 laboratory at its plant at Mt. Holly, N. C. The planned building will contain more than 17,000 square feet of floor space, which will more than triple the firm's present laboratory facilities.

Leland G. Atkins, president of the company, said the new building will accommodate research, development, sales service and standardization laboratories and pilot plant.

Texize Chemicals Acquires Industrial Products Co.

Texize Chemicals Inc. has acquired the capital stock of Industrial Products Inc. Both companies manufacture and distribute textile sizing and finishing products and have factories in Greenville. The Industrial Products plant will continue in operation, Textize president W. J. Greer said, and there will be no change in personnel or sales policies of Industrial Products under the new ownership.

The acquisition of this company enables Texize Chemicals to further expand its development and research program and offer even better service to mills and finishing plants, Greer said.

John B. League is president and secretary of Industrial Products and Charles J. Peter-

"That fellow Karl Smith is a real snob.
He won't pick up anything but Dillard paper!"

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son is vice-president and treasurer. It was organized in 1933 to manufacture and distribute warp sizing and finishing materials. The purchase climaxes a steady growth of the Texize operation since its formation back in 1945. Organized to serve the textile industry with sizing and other chemical compounds, Texize in a period of 14 years spread its distribution throughout the U. S. and Canada with all manufacturing being done in Greenville.

In spite of the textile recession of 1958, Texize textile division sales showed a 20% increase for that year, and the 1959 sales picture is expected to reveal another substantial growth year for the division, Greer said.

American Cyanamid Co. Realigns Fibers Division

American Cyanamid Co., New York City, has realigned marketing responsibilities in its fibers division, and is reassigning key personnel to conform to the change, according to Alden R. Loosli, division general manager.

The change is in keeping with the broadening of markets for Cyanamid's Creslan acrylic fiber, Loosli reported. It will permit greater service to all mill and greige goods sales levels, he said, and will put more emphasis on merchandising activities.

The realignment splits sales and merchandising functions and establishes over-all managers for each operation, he explained. Until now, the division has charged its managers in the knitgoods, woven goods and home furnishings fields with both sales and merchandising responsibilities. These departments will now be abolished.

J. O. Ross Opens New Office Building

J. O. Ross Engineering Division, Midland-Ross Corp., New York City, opened a new office building at 320 S. School St. in the Webers Industrial Park area of Mt. Prospect, Ill., recently. The 12,500-square-foot building affords three times as much space as the former office in the Chicago Loop and the site provides space for future building expansion, the company reported.

Headed by L. G. Janett, vice-president, the office serves the territory bounded by Canada, the Gulf of Mexico, the Rockies and the Middle Eastern states. The main office of Ross Engineering is in New York City, with manufacturing plants in New Brunswick, N. J.; Boston, Mass.; and Los Angeles, Calif. The company develops, designs and fabricates equipment for controlled atmospheres in processing plants.

Sales Up At A. E. Staley Mfg. Co.

The A. E. Staley Mfg. Co., corn, soybean and chemical processors with headquarters in Decatur, Ill., has reported a net profit of $5,712,982 for the fiscal year ended September 30, compared with $5,881,267 for the previous year. Staley acquired the U B S Chemical Co. of Cambridge, Mass., on June 30, and the report figures are on a consolidated basis, with year-ago figures adjusted for comparison. Net sales for the fiscal year reached a new high of $168,704,309 in comparison with net sales of $161,468,002 for the preceding year.

Commercial Factors Reports Record Year

Commercial Factors Corp., New York City, reports that 1959 was the biggest year in its 130-year history. The company's factoring volume for 1959 will approximate $440 million, an all-time record, according to Walter M. Kelly, president. This represents a gain of more than 14% over the 1958 total of $385 million.

New business in both textile and non-textile fields contributed substantially to the 1959 high, he asserted. The future looks bright, said Kelly. Flexible financing of the type provided by old-line factoring firms will be in even greater demand than it is today as medium-sized companies seek to expand under the pressure of stronger competition for money and for markets, he said.

Creslan Now Available In Germany And Switzerland

American Cyanamid Co.'s Creslan acrylic fiber is being marketed for the first time in Germany and Switzerland, the company has announced. Aclylic fiber produced at Cyanamid's Santa Rosa Plant near Pensacola, Fla., is now being made available to mills and processors serving the markets in these two European countries, the company reported.

Announcement of the initial European marketing program was made by Dr. Robert C. Swain, director general of Cyanamid International, the company's overseas operating division. A vice-president, Dr. Swain directed the company's product development and research during the years when Creslan was developed.

The introduction marks the first time that the fiber has been offered to mills and processors outside the U. S. and Canada. Consumer products containing Creslan have been available in the U. S. since the early part of 1959.

Pittsburgh Plate Glass Creates Fabric Sales Dept.

Due to the growing demand for fiber glass textile yarn, Pittsburgh (Pa.) Plate Glass Co. has announced the establishment of a decorative fabrics merchandising department to continue its expanding sales promotion program for the fiber glass division. Pittsburgh Plate has announced the fiber glass division's new yarn plant at Shelby, N. C., will be expanded by 50% to satisfy customer requirements for high quality fiber glass yarn. The Shelby plant will be established as the world's largest textile fiber glass plant employing the direct melt system exclusively upon completion of its expansion program next year. The firm also produces fiber glass at Shelbyville, Ind.

Ciba Co. Establishes Pigments Division

The establishment of a pigments division has been announced by the management of Ciba Co., Fair Lawn, N. J. Administrative, sales and technical activities of the new division will be located in the new building at Fair Lawn occupied by Ciba early in 1959.

The pigments division of Ciba will handle a broad range of organic pigments, pigment dispersions and soluble dyes. P. L. Penaud has been named manager of the new division. He has been associated in Ciba's pigment activities in both technical and sales capacities in Western Europe.

H. G. Osolin will be in charge of technical operations. He was previously in charge of the pigments application, technical service and control laboratories of the parent company, Ciba Ltd. in Basle, Switzerland.

Record Backlog Reported By The Roberts Co.

Increasing interest in mill modernization and an enthusiastic acceptance by the industry of its new Arrow spinning equipment are said to have brought the Roberts Co.'s backlog of orders to a record high of $4,270,195. Robert E. Pomeranz, president of the Sanford, N. C., firm, said that this total, which covers shipments to be made by mid-1960, is greater than sales for all of 1957, the previous record sales year. Roberts Co. employment is also the highest in its 11-year history, up over 30% from a year ago.

Pomeranz noted that sales for the third

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quarter rose 50% above each of the first two quarters. Preliminary estimates indicate a modest net operating profit for the three months ended August 30, he said. Roberts fiscal year ending November 30, 1959, should show sales above $5,000,000, and expected earnings in the fourth quarter may substantially reduce the loss sustained in the first half during which sales totaled $1,997,592, according to Pomeranz.

U. S. Patent Issued On Yarn Tension Device

Patent No. 2,907,535 has been issued by the U. S. Patent Office for an electromagnetic yarn tensioning device for creels, winders, bulked yarn equipment, hosiery machinery and other yarn processing applications perfected by Lindly & Co., Mineola, N. Y.

Called the Electrotense, the device was made available to the textile industry during the first part of 1958. It is said to assure more uniform yarn tension, easier and quicker change of tension, more yarn and decreased machine down-time with better and more economical cloth resulting.

Du Pont Textile Lab Set Up In Geneva

A new textile testing laboratory to assist customers in Europe and other parts of the world in their use of Du Pont synthetic fibers was opened in Geneva, Switzerland, recently by Du Pont de Nemours International S. A.

The laboratory will serve customers for the company's textile fibers in Europe, Africa, the Middle East, Asia, the Pacific area and Australia. It will also supplement the company's Orlon acrylic fiber plant in The Netherlands, which is scheduled to start production in 1961.

Textile Banking Reports $600 Million Volume

Textile Banking Co., New York City, estimates that its 1959 volume of business will be about $600 million. This compares with about $485 million in 1958. About 75% of the firm's volume is centered in the textile and apparel fields. The company reports that its 1959 volume is the greatest ever achieved by a single firm in the "old line" factoring field. Textile Banking is a wholly-owned subsidiary of Commercial Credit Corp. It has two subsidiaries of its own, TBC Associates, handling retail factoring, and Southwest Texbank, St. Louis, Mo., serving the Midwest.

Chemstrand President Reports On Chemical Fibers

Technological advances are producing a wider variety of chemical fiber types, tailored to fit more precisely end-use needs, and at a lower cost to consumers, Edward A. O'Neal Jr., president of the Chemstrand Corp., told members of the Tufted Textile Manufacturers Association meeting in Chattanooga, Tenn., recently.

He estimated that the average annual expenditure on over-all developmental expenses such as research, process improvement, engineering, etc., by the seven major companies producing true chemical fibers is in the range of $40,000,000 to $50,000,000.

"To supplement this," O'Neal said, "the textile industry must be spending millions concurrently in yarn and fabric development It is the joint development efforts of the two industries that has made real progress possible."

O'Neal said that the effort should result in improvements in costs of raw materials for fiber manufacture; improvement in costs of spinning as a result of improved processes and equipment; and lower capital costs of facilities—all pointing to a continued decrease in the relative cost to the fiber consumer.

"From the textile manufacturing viewpoint," O'Neal said, "we visualize the supply of a wider variety of fiber types to be made available, tailored to fit more precisely the end-use need."

McLean Trucking To Buy Hayes Freight Lines

McLean Trucking Co., Winston-Salem, N. C., recently received final approval from the Interstate Commerce Commission to purchase Hayes Freight Lines Inc., according to Paul P. Davis, McLean president. The Hayes line serves the Central States bounded roughly by Memphis on the south, St. Louis on the west, Detroit on the north, and Pittsburgh on the east.

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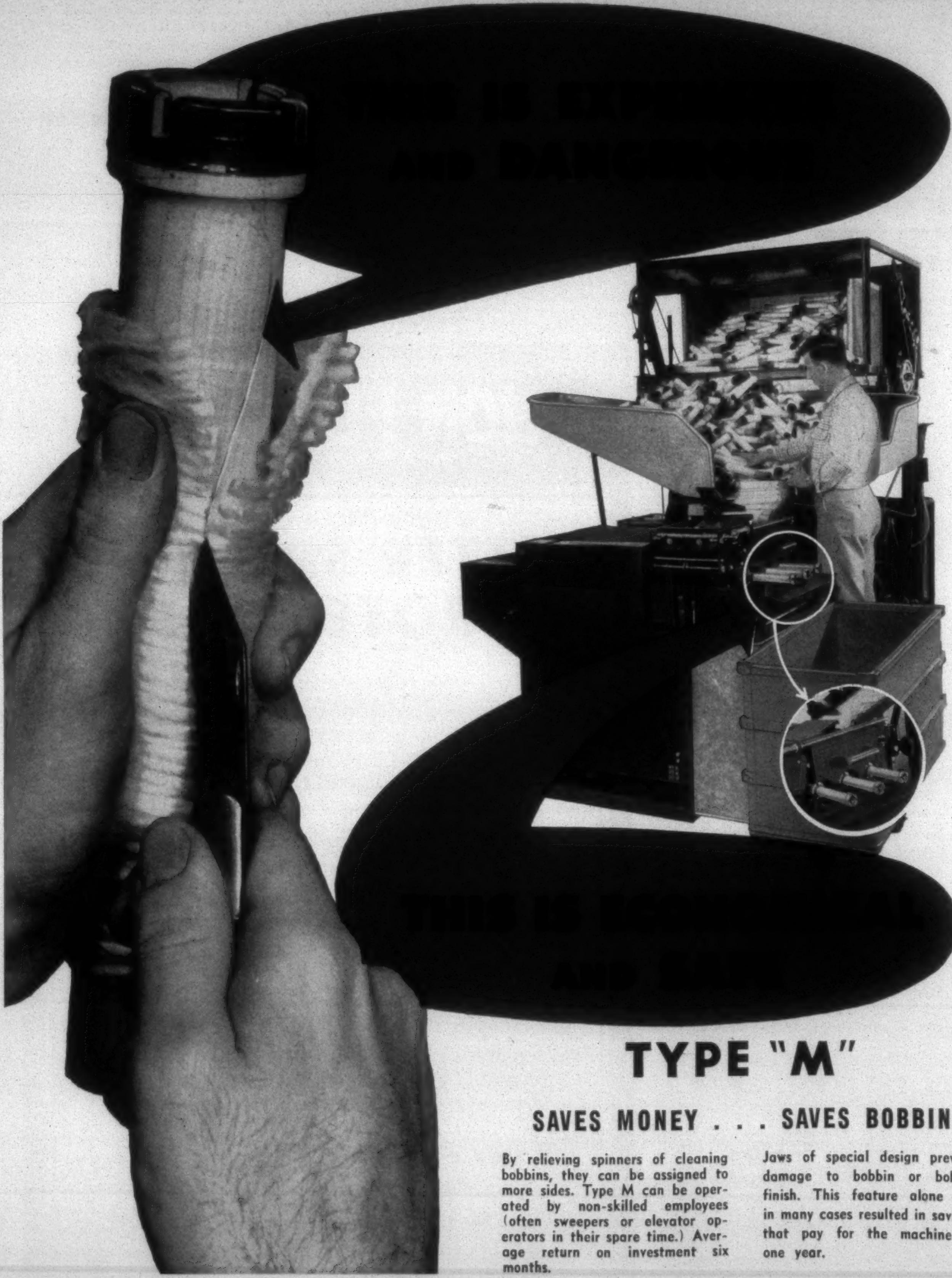

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textile bulletin

VOL. 86 JANUARY 1960 NO. 1

The Textile Outlook For '60 Is Bright

CONTINUING HIGH PRODUCTION AND SALES ARE PREDICTED FOR THE FIRST HALF OF '60—BEYOND THAT, THE UNKNOWN

By LARSTON D. FARRAR

THE annual parade of forecasts—by both federal economists and those representing private business groups in Washington—promise a bright outlook for the economy generally in 1960 and for the textile industry segment particularly, certainly for the first half.

Dr. Emerson P. Schmidt, economic director for the U. S. Chamber of Commerce, whose forecasts have been uncannily accurate for some years, is convinced that 1960 will see Gross National Product (GNP)—the total amount of goods and services produced by everyone—hit the $505 billion a year clip.

Long Term, Short Term

Federal economists usually differentiate, in their forecasts regarding the textile industry, between the short-term outlook and the long-range outlook.

"The textile industry, now in surprisingly excellent shape, will maintain its high rate of production and sales for some months to come," one economist who specializes in this field declared.

"However, my prediction will not go beyond July 1, due to many factors that impinge upon the textile industry. It already has been put through the wringer—suffering a 'washing out' of no small proportions—in recent years. Personally, barring some factor not now foreseen, I believe the resumption of this 'washing out' seems likely for the long term."

The biggest single factor that has seemed to undergird the textile industry's current "prosperity," compared to other periods, is the willingness of the average American consumer to upgrade his or her textile purchases in the market place. It is intimately related to a high level of personal income.

Therefore, it is heartening to the domestic industry to read, and hear, that personal income (which has been very high this year, and suffered relatively little, even during the long-drawn-out-steel strike) is apt to grow in volume at least during the first half of '60.

Some predictions are made that personal income may hit a $400-billion-a-year clip before the end of '60, although this might be too optimistic, everything considered.

It is safer to predict, based on projections, that retail sales (which came close to $220 billion in 1959) probably will climb to $225 billion, or perhaps even over $230 billion (dollar sales) in 1960. If so, this will mean a gradual upgrading that harbingers well for the U. S. textile industry.

Basic Factors

Dr. Schmidt bases his forecast on a "5 to 6%" gain in the over-all economy on these factors:

Government spending on the federal level will go up to $81 billion. On the state and local level, such spending will increase $2 to $3 billion (even more than the increase in store for Uncle Sam).

All construction will hold steady at about $55 billion because private nonfarm housing will be 5 to 10% under 1959's 1.3 million new starts.

Consumers will get a break on food prices, which generally will hold steady or even drop a percentage point or two, but farm income will fall by another $1 billion, from the $11.2 billion of 1959.

It is significant that this business spokesman, and private economists generally, having been more optimistic (and correctly so) than federal economists in recent years, are making forecasts that sound strangely like those emanating from the federal government as 1960 begins. In short, there is more unanimity about the outlook than in other recent years, and not quite as much exuberance among the primarily business spokesmen.

Yet, despite the apparently-unanimous view about growth of the economy for the New Year on the part of *all* economists in Washington, there are some signs of incipient trouble on the economic horizon that might well be considered by management as it makes plans for the future.

The Steel Strike

One important question mark, of course, is whether or not there will be a settlement between Big Steel and the United Steelworkers of America before the 80-day Taft-Hartley injunction ends in late January. If there is no agreement, a resumption of the strike appears inevitable.

The U. S. Chamber's economic spokesman, lashing out at the union's president, David J. McDonald, declared that the 1959 steel strike cost the economy "billions of dollars," and that a resumption of the strike would be costly indeed.

"He (McDonald) may go down in history as the most expensive labor union official in all our experience," Dr. Schmidt said, declaring that consumer prices will rise 1 to 1.5% normally, but that they would go appreciably higher if the steel industry agrees to the union terms.

Secretary of Labor James P. Mitchell has declared it is "unthinkable" that the steel management and labor leaders cannot come to terms. He predicts that the results, if an agreement is not reached, might well be "catastrophic," economically.

While most economists would not label such an eventuality as "catastrophic," they nevertheless view a steel settlement as crucial to the economy in 1960. They point out that such a strike puts a crimp in the over-all personal income, eventually affecting hundreds of thousands of other workers (besides steel workers), and generally casts a pall over an otherwise bright economic picture.

"Steel is the backbone of our industrial economy," one economist points out. "If the backbone isn't holding firmly, it makes a big difference as to whether or not other portions of our economy sag. Steel may be called more accurately our 'industrial jugular vein' than even our economic backbone, but in any case it is of great strategic importance."

Tight Money

Another important factor—and it is one that many economists seem to overlook purposefully, although its importance cannot be denied—is that of public credit, or money. Frank E. Morris, research director for the Investment Bankers Association of America, has warned of even higher interest rates and tighter money, in the face of many yelps from the business community that money already is "far too tight."

He said that there are heavy demands for credit being built up from businessmen, for inventories, consumers for cars, and local governments for new outlays. At the same time, the Federal Reserve Board has maintained its curb on the supply of money, unlike the easier posture it adopted in the 1956 steel walkout.

While the strike itself has reduced the demand for loans, he said, an agreement in steel would cause an increase of at least ½% in the Fed's interest charge to banks. Thus the short-term rate for the most blue-chip borrowers would go from 5% to 5.5%.

Senator Hubert H. Humphrey (D.-Minn.), who accurately foretold both the recessions of '54 and '58 far in advance of their actual occurrence, has been leading the critics of "tight money." He recently has pointed out that, in spite of greatly expanded economic activity, the *ratio* of money in existence to GNP (total goods and services produced by everyone) actually is lower right now than it has been at any time since 1929.

He has predicted that unless there is some appreciable relaxation of the "tight money" and high interest policies being pursued by the Fed (in collusion with the White House, which has concurred heartily in the policies), there could well be an economic downturn by mid-year, 1960. Even without a downturn, he said, there already has been a noticeable halt in the growth of the economy, which, considered against the backdrop of increased population, is economically ominous.

The Senator says that even a "dip" in the general economy would run unemployment up to a dangerous six million level in a relatively short time.

As many businessmen know already, the credit pinch *can* serve as a sales deterrent.

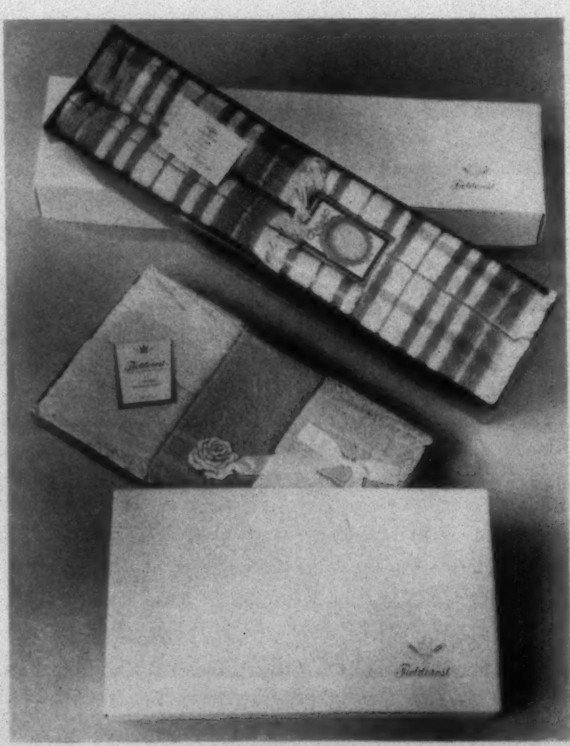
Perhaps the most amazing factor, in the present situation, is the continued growth of debt, in the face of a continued rise in interest rates and a restriction of the available supply of currency. This may well be the most significant economic factor of this period, and it *could* mean great danger ahead. Whether or not it *will* mean this remains to be seen, of course.

$50 Billion Personal Debt

Consumers came into 1960 owing—on charge accounts and installment contracts—some $50 billion. This may not seem large, measured against a total personal income of $380 billion, but it *is* high, compared to all past years. Consumers have run the "personal debt outstanding" total up all during the past year—1959—at virtually record rates.

These debts are relatively small, compared to the total amounts owed on home mortgages—this total now is also at a record rate—and to its debts owed by states and municipalities, not counting Uncle Sam's close-to-$290-billion debt.

Considering that *all* these debts now are carrying record-high interest rates, it seems to many economists that 1960 may be the year in which businessmen will reverse the long-time trend and encourage *cash* sales, and cash transactions, all along the line, to the ultimate consumer, rather than urging customers either to buy on time or to charge it.



FIELDCREST MILLS is now marketing its main towel line in these gift-buying boxes which feature all-white vinyl-coated lids. The coating gives the box a prestige appearance, and at the same time minimizes fingerprinting and soilage from handling. Four box sizes market a variety of towel sets in pastel, flower and stripe designs. Each carton includes individually packaged soap in matching towel color, or a sachet. The boxes are by Container Corp. of America.

No economist really knows—and few of them will even hazard a guess anymore—just how much debt the economy can stand, no matter how big it is, without sagging, or breaking on the economic front. A smaller economy has "broken" in other years, with much less debt, and it is possible that today's huge-bursting-at-the-seams economy is about to come to the limit of its carrying-power on debt.

Even without higher interest rates (which seem inevitable as the year begins), businessmen are in for some high costs that almost certainly will push prices higher—and perhaps faster than some economists foresee.

For one thing, effective January 1, the social security tax take rises to 6% (3% for employees and 3% for employers).

On February 1, parcel post rates go up 17.1%, which means that businessmen will have to pay out an additional $87 million a year for this service, a cost many of them may or may not be able to pass along.

Utilities generally—from telephone companies to electrical utilities and railroads—will be seeking rate increases in '60, to maintain their earnings. This will add costs to the operation of all other businesses, of course.

A steel price hike—which may follow any settlement, and a settlement eventually *will* be made—may set off a round of price increases all over the lot. If so, prices conceivably could go up as much as 3 or even 4% in 1960. Such a rise—not probable, but still possible—would have unusual economic consequences.

A Political Year

The New Year will be a time of national political debate, for in November a new President will be elected and voters will decide on the make-up of the House of Representatives and one-third of the Senate.

Meantime, long before November rolls around, decisions of great importance to the textile industry (and all other industries) will be made on Capitol Hill. Business representatives on Capitol Hill already expect to be more active—and the situation seems to justify their expectations—on Capitol Hill during the second session of the 86th Congress than they were in the first session.

Of great importance is the question of whether or not the House Committee on Ways and Means will bring out new tax legislation, providing for a tax cut for both corporations and individuals. The committee has been holding hearings, looking toward a thorough revision of the Internal Revenue Code, and while no one here is predicting a new tax bill, there is a general air of expectancy among the most astute observers.

The shape of such legislation, of course, will be of paramount importance to businesses, and particularly those in the textile industry. Special tax consideration for industries imperiled by overseas competition could be of prime importance in determining the future course of the destiny of the textile industry, as well as that of other industries similarly imperiled.

Increased Minimum Wage

Just as important an issue, in the minds of many business activists, will be that of the proposals for revising the Fair Labor Standards Act, so as to raise the minimum wage to

(Continued On Page 67)

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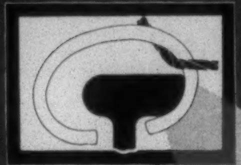

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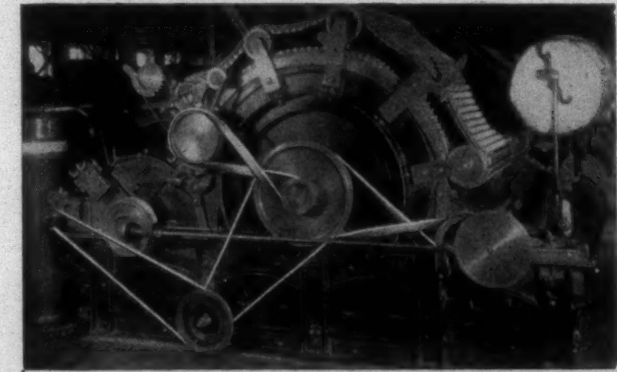

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1950-1960—Ten Years Of Textiles

THE ANNUAL SURVEY OF THE ASSOCIATION OF COTTON TEXTILE MERCHANTS OF NEW YORK

By **W. RAY BELL**

President of the Association of Cotton Textile Merchants of New York

THE twenty-eighth annual survey of The Association of Cotton Textile Merchants of New York covers a decade whose initial and end years experienced similar transitions from depression into the realization of substantial and vigorous recovery. Between the depths of 1949 and 1958 were severe market and mill adjustments of 1952 and 1954, each of whose downswings were succeeded by longer movements upward. While these variations of cyclical direction coincided in general with the course of our national economy, peaks and valleys in the textile situation have been accentuated by periodic distortions in supply and demand relationships and a normal delay in adopting measures of corrective adjustment. In consequence, the toll on productive facilities during the decade has been exceedingly heavy, especially over the past five years.

Equipment Shrinking

Specific examples for cotton mills are:

(1) **Spindles in Place**—From 22,906,000 at the beginning of 1954 to the current figure of 20,285,000 at the end of September 1959. The interim decline of installed spindleage amounts to 2,621,000, or roughly 11.4%.

(2) **Active Spindles Consuming Cotton**—Average of 19,383,000 in 1954 down to 17,652,000 on October 3, 1959. The decline here is 1,731,000 active spindles, or about 9%. The current total is practically the same as the chart average for 1958. In cotton system mills, spindles active on other fibers and blends have increased from an average of 1,327,000 in 1954 to a current level of 1,640,000.

(3) **Looms in Place**—From 391,881 at the start of 1954 down to 326,220 at the beginning of 1959. This liquidation of 65,661 looms in the past five years represents a decline of 16¾% in weaving equipment.

(4) **Active Looms**—The current figure is 316,203 against 357,931 at the beginning of 1954. Here the loss is 11.7%.

Similar reductions in potential capacity have been in progress throughout the textile industry with respect to looms engaged in the production of broad woven goods. In the major division of man-made fibers and silk mills, installed loomage has declined from 110,954 at the beginning of 1954 to 93,905 at the start of 1959. The five-year cut is 17,000 looms, or approximately 15%. The most recent estimate of active looms in this division was 87,210 versus a total of 96,347 operating at the beginning of 1954. The drop here is over 9%. Woolen and worsted looms in place were 14,453 at year's beginning in 1959. In June 1953, they were estimated at 32,089, with 24,153 rated active.

Thus, in each major branch of woven textiles there has been a parallel experience of drastic liquidation of productive machinery over the past five years and, to that extent, an over-all shrinkage in potential capacity. This combined with the trend toward five-day weekly operations, should effectually curb the tendencies for over-production which have been the plague of preceding textile cycles.

Productivity Gains

In the past history of the industry, increases in weekly operating time and the higher productivity of more modern machinery have compensated importantly for the long continued attrition of plant facilities. With respect to the first, it is possible that a peak has already been reached, since many mills have announced discontinuance of their Saturday schedules and do not plan resumption. As to modernization, chart figures on new installations are limited to spindleage but in the past five years their total reached only 1,208,000. Further gains in productivity undoubtedly derive from an unknown quantity of rebuilt machinery. Notwithstanding the improved technology, the Census figures quoted above indicate an important reduction in potential capacity for the production of broad woven cotton goods.

Markets Expanding

In cotton textiles, the current restoration of health and relative prosperity has a direct relationship to this improved balance between the forces of supply and demand. Markets which touched bottom in early Summer of 1958 have continued to thrive under the stimulus of sustained retail consumption and profitable activities in the various channels of distributive trade. Forward buying, which was heavy last May and June, has been resumed this Fall, for deliveries extending well into 1960. With no overhanging mill stocks, firm and improved price levels, plus expanding order books, sellers generally view the future with optimism and look forward for an extended period of sound business sufficient to justify the maintenance of a high rate of mill activity.

Values Of Moderation

This favorable perspective has been encouraged by the evidences of moderation and orderly activity on the production front. Despite pressures of demand, new production of broad woven cotton goods during the first six months of 1959, has been estimated by the Census Bureau at an over-all total of 4,770 million linear yards, or an increase of approximately 5% over the 1958 volume of 4,548 million linear yards. This performance contrasts sharply with prior records of recovery years when first half output invariably exceeded five billion linear yards. In 1953, it was 5,228 million and in 1956 first half year production mounted to 5,405 million linear yards. For the entire year, it is likely that yardage gains over 1958 will be more substantial, since the nine months' increase in cotton consumption amounted to 812,000 bales over 1958 and for the corresponding periods the improvement in spindle hour activity approximates 12%. Measured in linear yards, the annual total for 1959 should approximate 9,700 million.

Prolonging Recovery

In its ambitious and conscious effort to stretch out the period of recovery and escape, if possible, the yoke of cyclical recession, a difficult but major problem of the industry involves the curbing of speculative buying activities. Practically every past recession had its origin in over-enthusiastic projections and commitments by the buying trades, leading to production increases which subsequently proved too great for quick absorption in distributive channels. Although prosperity and satisfactory operations in the textile industry are linked to the pursuit of forward buying policies in the trade, excesses which result in stagnant inventory at any stage of distribution can be harmful in a boomerang effect on the primary market. Avoiding such excesses in a rising market is not simple or easy but past experience in the current decade clearly recommends against the twin evils of making goods for storage in mill warehouses and forward sales at prices which do not include a reasonable margin of profit.

By-Passing Cycle

Fortunately, the warnings against over-production relate to future situations rather than the present, where the immediate challenge to the textile industry is patently in the area of production. With the former potential production from marginal units wiped out through their liquidation in recent years, market demand has been outrunning supply in most divisions. In consequence, for 16 consecutive months there has been no setback in the upward movement and the flow of goods into consumption has increased without signs of undue accumulation in the channels of trade. Within the decade and even longer except for war years, this is an unprecedented breach of the so-called textile two-year cycle, in which troughs and peaks occurred in alternate years. It gives emphasis to the concept of a textile renaissance predicted by some analysts several years ago, in which stability of operations and earnings would supplant the wide fluctuations commonly associated with the industry.

Consumer Spending Constant

While the commendable performance of 1959 is a forward step in this direction it provides no guarantee that future years will retain the favorable balance. High productive activity seems definitely assured for the first half of next year based on the large volume of forward bookings but we are still in a period of catching-up operations which include provision for inventory maintenance along with current demand for final consumption. For the latter, retail stores in their buying habits can have appreciable effect at every stage of textile and apparel distribution. In servicing the needs and desires of 179 million American consumers it can be hoped that their current optimism will be well rewarded with bountiful sales.

This is to say that, in final analysis, continuity in progress and growth for the cotton textile industry is dependent in large measure upon not only the steady gains in public consumption of its finished products and those of its customers in the trade, but also upon countless inventory decisions at the retail level. It has been previously remarked that "consumer spending has been noticeably resistant to decline in post-war recessions and has grown rapidly in recoveries." This view is currently supported by the general expectations of record retail sales for the current year and the further improvement looked for in 1960 implies no sudden changes in policies of maintaining adequate reserves of inventory.

Imports Are Major Peril

The chief roadblock in the way of extended recovery and the source of direst peril to future progress lie in the always mounting tide of imported fabrics and apparel whose origins now represent over 50 separate nations. Each of them enjoys the waiver by our government of the statutory working conditions and social standards under which American textile mills are forced to operate. This means a privileged status of low labor costs for which there is no equalization in existing tariff schedules. Tariff reduction to impotency has long since been accomplished through concessions made in G.A.T.T. negotiations. Many of the foreign competitors now possess ultra-modern textile equipment supplied by American taxpayers and some of them share special benefits of large textile purchases by the U. S. government either in the nature of off-shore procurement or in the processing of cotton under triangular deals. The crowning discrimination against American enterprise and employment has been the U. S. government policy of selling American grown cotton to foreign textile producers at a bargain price, now lower by 8 cents a pound or $40 per bale than the prices American mills are forced to pay for the same raw material.

Under these existing and extraordinary policies of preferential treatment, foreign competitors have been equipped with overwhelming advantages in price competition. Sharing no responsibility for the maintenance of American standards, employment or taxes, they remain free to flood our markets with the products of ill-paid labor, made under any kind of working conditions, out of the bargain priced cotton endowed by our own government or cheaper foreign growths. Over the past five years, the records of market experience show an unmistakable trend toward displacement of American goods through their inability to cope in price with the competition especially from Asiatic countries whose wage and labor costs are but a small fraction of American minimum standards.

Declining Exports

First, in international trade, U. S. exports of finished cotton manufactures have declined from a valuation of $264,900,000 in 1954 to $233,400,000 in 1958. The current year will undoubtedly witness further declines, since reports of the Department of Agriculture state that exports of broad woven cotton goods for the first eight months of this year were about 10% under those of the like period of 1958. It is observed that the continuing losses in U. S. export business have occurred despite the grant of an

TEN YEARS OF COTTON TEXTILES

Data assembled by The Association of Cotton Textile Merchants of New York from Bureau of the Census reports and information obtained through the courtesy of machinery manufacturers.

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
EQUIPMENT											
COTTON SYSTEM SPINDLES											
Spindles in place at beginning of year	23,751,000	23,342,000	23,113,000	23,178,000	23,131,000	22,906,000	22,560,000	22,226,000	21,553,000	21,075,000	20,689,000
Increase or decrease from preceding year	24,000	−409,000	−229,000	65,000	−47,000	−225,000	−346,000	−334,000	−673,000	−478,000	−386,000
New installation, additions and replacements	858,623	649,780	771,065	295,642	267,328	219,282	321,920	403,916	190,144	72,708	
OPERATION											
CONSUMING COTTON ONLY											
Average number of spindles active on last working day of month	20,063,000	20,456,000	20,662,000	19,944,000	20,051,000	19,383,000	19,137,000	19,064,000	18,276,000	17,650,000	
CONSUMING FIBERS OTHER THAN COTTON, OR BLENDS											
Average number of spindles active on last working day of month	1,174,000	1,295,000	1,261,000	1,337,000	1,323,000	1,327,000	1,541,000	1,534,000	1,582,000	1,647,000	
ALL COTTON-SYSTEM OPERATION											
Average number of spindles idle on last working day of month	2,334,000	1,372,000	1,264,000	1,887,000	1,572,000	2,015,000	1,628,000	1,234,000	1,443,000	1,539,000	
Spindle hours run:											
On 100% cotton	97,874,000,000	117,753,000,000	118,163,000,000	109,986,000,000	118,647,000,000	108,930,000,000	116,809,000,000	115,210,000,000	107,099,000,000	103,581,000,000	
On other fibers, blends	5,816,000,000	7,502,000,000	7,563,000,000	7,583,000,000	7,487,000,000	7,560,000,000	9,613,000,000	8,550,000,000	9,008,000,000	9,120,000,000	
Hours run per average active spindle	4,882	5,760	5,735	5,524	5,901	5,625	6,114	6,008	5,847	5,840	
MARKET											
COTTON TEXTILES											
Production in square yards	9,391,578,000	11,206,659,000	11,415,218,000	10,593,006,000	11,332,562,000	10,892,456,000	11,319,347,000	12,047,791,000	11,105,825,000	10,470,245,000	
Exports in square yards	880,255,000	558,678,000	802,427,000	761,595,000	621,005,000	605,047,000	537,493,000	506,570,000	547,889,000	500,979,000	
*Imports in square yards	19,743,000	47,799,000	45,779,000	36,337,000	64,300,000	73,484,000	133,252,000	188,248,000	122,447,000	143,166,000	
Available for domestic consumption	8,531,066,000	10,695,780,000	10,658,570,000	9,867,748,000	10,775,857,000	10,360,893,000	10,915,106,000	11,729,469,000	10,680,383,000	10,112,432,000	
Population at July 1st	149,188,000	151,683,000	154,360,000	157,028,000	159,636,000	162,417,000	165,270,000	168,176,000	171,196,000	174,064,000	
Available for per capita consumption in square yards	57.18	70.51	69.05	62.84	67.50	63.79	66.04	69.75	62.39	58.10	

*Countable Cloths only.

equalization fee on U. S. exports of cotton products, established three years ago to compensate for the raw cotton subsidy accorded to foreign textile producers.

Expanding Imports

In the home markets, which represent demand for 95% of domestic production, the lack of equalization measures has been a strange omission, particularly in view of the precedent established by legislation in 1934 when the ill-fated processing tax was levied on domestic consumption of cotton mills. Here there has been a major development in the concentration and expansion of imports in items of cotton apparel and other fabricated products. Obviously, the strong appeal of pyramiding labor cost advantages through the three stages of cloth weaving, finishing processes and apparel fabrication has been attractive, especially in Japan and Hong Kong which together supply the large bulk of cheap garments imported into this country. Wearing apparel imports have had a fantastic rate of growth, for which the records of foreign value show a climb from $18,100,000 in 1954 to $71,100,000 in 1958. Further increases during the current year suggest an estimate of $95 to $100 million for 1959 or about half of total valuation for all imports of finished cotton manufactures. The major factor in this precipitous advance is Hong Kong whose exports of cotton goods to the U. S., chiefly in apparel items, has grown in value from less than $1 million in 1956 to $17,338,000 in 1958 and a projected total of $50 to $60 million for 1959. Another significant development in the 1959 experience has been a near 100% increase in physical volume of unbleached cloth imported in the first nine months of the year, from 36,322,000 square yards in 1958 to 72,000,000 square yards this year. Major sources of the increased supply have been Hong Kong, India, Korea and Pakistan, and a substantial portion of the yardage is in the form of soft filled sheetings and other staple fabrics in the medium yarn range.

Non-Cyclical Imports

Without minimizing the influence of our current recovery in the rapid increase of textile and apparel imports, their spectacular rise is more properly attributed to the wide price differentials, for which foreign producers have cost protection underwritten by our government policies. Hence, there was a substantial increase in imports of cotton manufactures in 1958 at the time we were struggling with depression and, in percentage improvement, imports have far surpassed the record of domestic output during the current year. Unless corrective measures of equalization or limitation are soon established, the discouraging pattern of future prospects is set in constantly increasing imports year after year, edging their way into all domestic markets and pushing American plants and workers out of their occupation whenever cyclical adjustments become urgent.

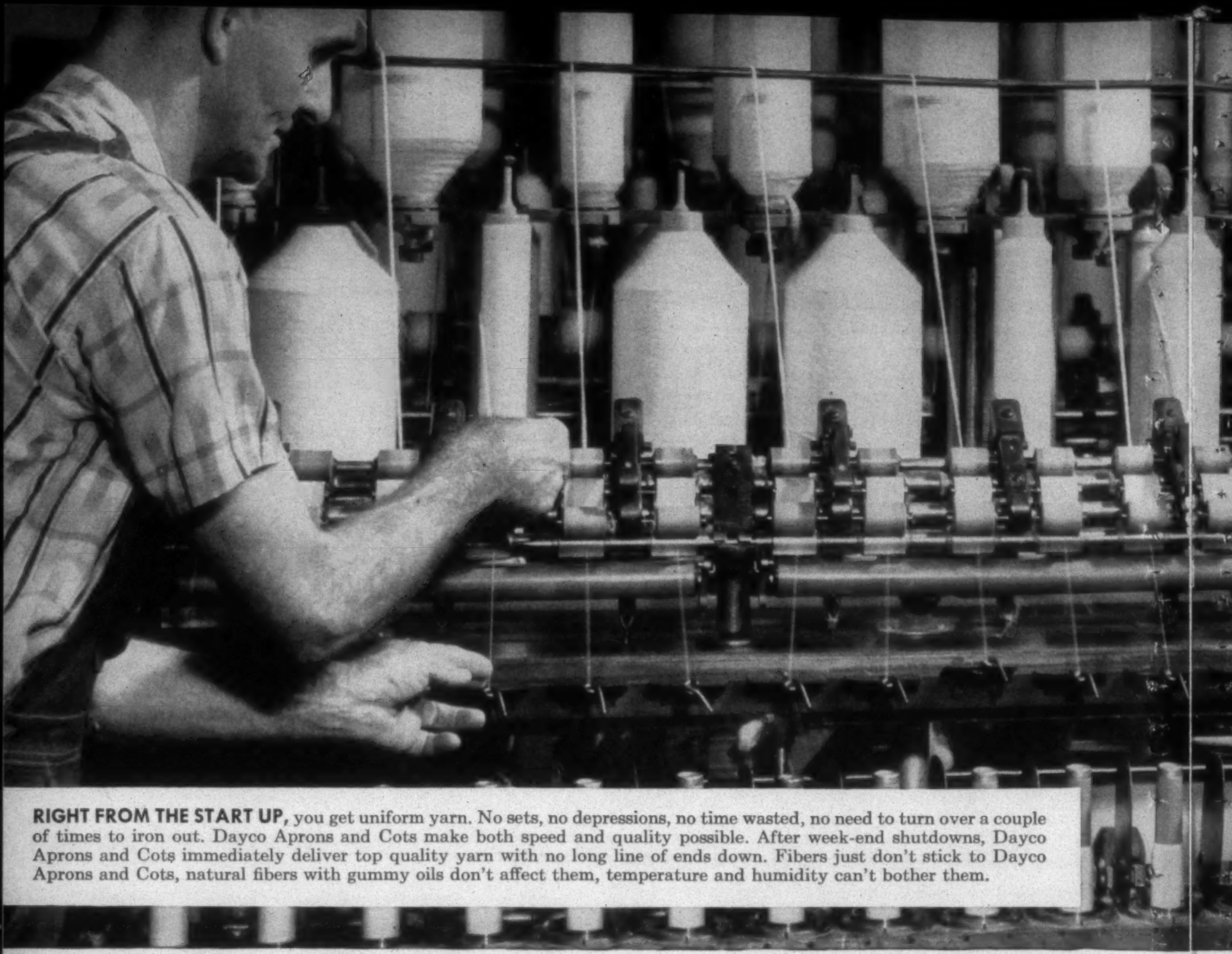
In the present sunshine of relative prosperity and its promising forecast for 1960, the experience of continuing losses in export business and cumulative gains in imports allows no illusions about the American industry's vulnerability in competition on the international trade level. These developments have contributed to the mounting deficits in the country's international accounts and the accompanying drain on its holdings of gold. More important, they have grown from an inequitable and unjust distortion of the principles of free and fair competition to which much lip service has been given. Reasonable consideration of the conflicting values cannot fail to endorse a revised program of foreign trade policy, through which the penalties on American production will either be equalized or their impact limited.

Equalization Fees And Quotas

Government responsibility for the inequity and potential injury from the double standards of its creation have been acknowledged and official agencies have employed both types of corrective methods. In the case of U. S. exports, compensation has been granted in the form of an equalization fee for the subsidy price of raw cotton when sold to foreign mills. On the other hand, quantitative limitations of products were preferred in the Japanese arrangements of three years ago when a five-year program became a mutual undertaking with that country. Although similar proposals have been made to Hong Kong, it is reported that they were rejected with the sound advice that the U. S. should make its own quota determinations.

Unfortunately, the limited scope of the pending investigation of the U. S. Tariff Commission would seem to ignore the wide disparities in wage and labor costs and look for culmination merely in the imposition of a compensatory tax on textile and apparel imports, regardless of origin, to equalize the raw cotton subsidy to foreign producers. Being generalized, as it was in previous legislation, such a tax would impartially restore some of the balance now weighted against the domestic industry but the pressures of low-wage competition will continue to crowd our markets and pinch them away piecemeal until reasonable safeguards are finally established.

AVISCO RAYON AND THE VALIANT—American Viscose Corp. has joined Chrysler Corp. in promoting fashions in conjunction with the new Valiant and Plymouth models for 1960 in 27 air, rail and bus terminals of 15 cities. Designs created by leading manufacturers will be exhibited on a rotating schedule for one year during the display of 1960 cars. Manufacturers have lined up retailers in each city to be responsible for dressing mannequins used in the displays. To further identify the terminal displays, signs crediting the Avisco fiber fashions will indicate both the designer and the local retail store featuring the merchandise. The gown pictured here of Avisco rayon chiffon lined with Avisco rayon taffeta is by Jerry Gilden, $17.95 retail.

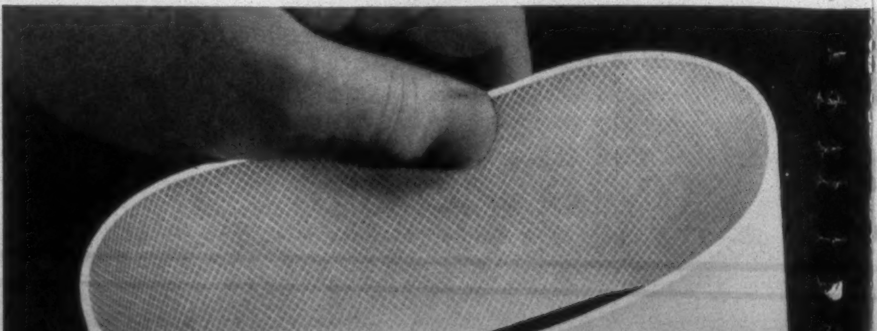


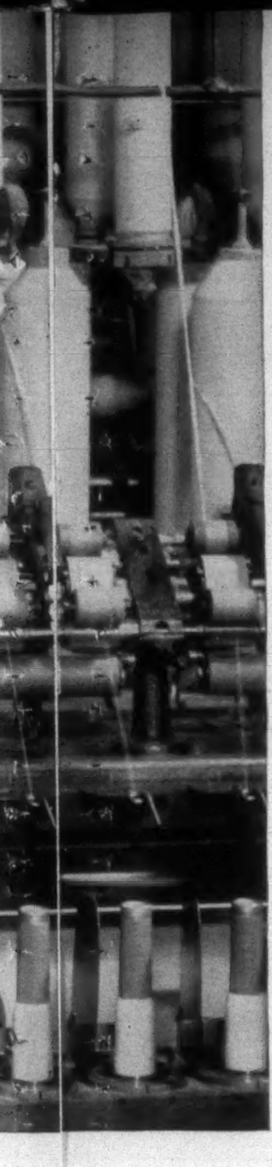
RIGHT FROM THE START UP, you get uniform yarn. No sets, no depressions, no time wasted, no need to turn over a couple of times to iron out. Dayco Aprons and Cots make both speed and quality possible. After week-end shutdowns, Dayco Aprons and Cots immediately deliver top quality yarn with no long line of ends down. Fibers just don't stick to Dayco Aprons and Cots, natural fibers with gummy oils don't affect them, temperature and humidity can't bother them.

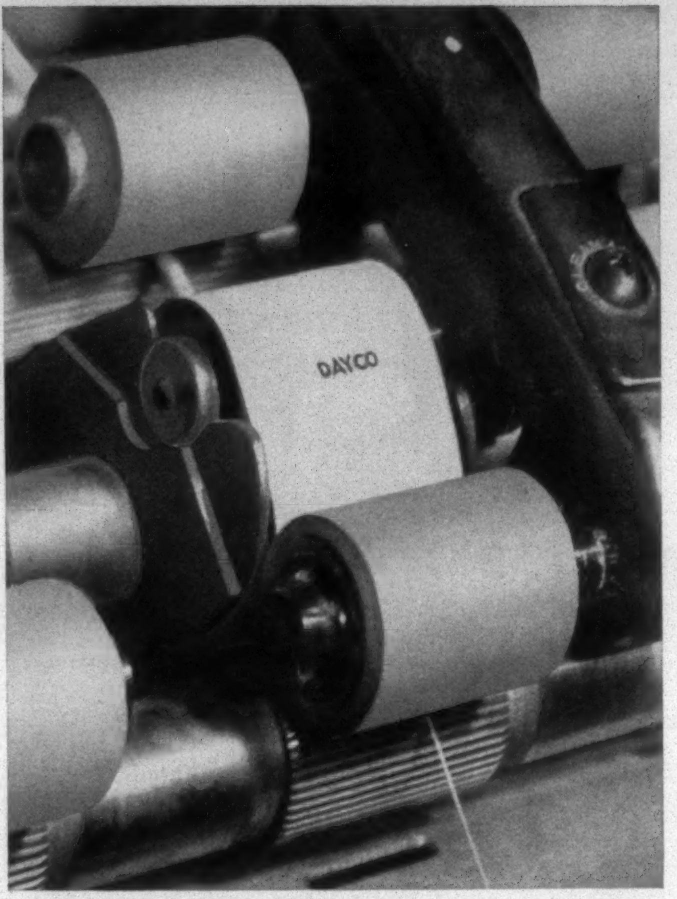
GET 12% BETTER YARN . . .

"UPS OUTPUT of strong uniform finer quality yarn" reports the overseer after a day with Dayco Aprons and Cots. Dayco's got just the right surface friction to leave the larger fibers in the yarn, not on the clearer board. You can count on Dayco Aprons and Cots when you want to count important extra yardage . . . better yarn . . . more full bobbins . . . at the end of the shift.

DAYCO'S EXCLUSIVE EMBOSSED DESIGN keeps the shaft clean, cuts your apron drag 50%, prevents tucking and eliminates waste-collecting. No sign of apron chatter, either.







DAYCO COTS STAY GOOD AS NEW year after year from buffing to buffing . . . keep all their fine-quality drafting characteristics. Dayco's long-run, top performance makes them the choice in leading mills.

. . . TROUBLE-FREE PERFORMANCE

with Dayco Aprons and Cots, the pair for profits

More yarn . . . better quality yarn . . . more consistency. These are the benefits that explain why Dayco Aprons and Cots are the choice of superintendents and overseers in leading mills everywhere. They are precision-made to exacting tolerances for modern super-drafting, and high yarn uniformity; precision-formulated for longer, trouble-free life. They outlast all others in oxygen-intensified checking tests. Dayco has proven thousands of times in the laboratory and in the mill there is no match for Dayco Aprons and Cots. Throughout their lifetime, they start better . . . stay better longer.

Ask your Dayco Representative to set up a time trial installation with Dayco Aprons and Cots . . . better results guaranteed. Phone or write the Dayton Rubber Co., Textile Division, 401 South Carolina National Bank Bldg., Greenville, South Carolina.

Dayton Rubber

Dayco and Thorobred Textile Products
for Better Spinning and Weaving.

OVERSEAS PLANT: THE DAYTON RUBBER COMPANY, LTD., DUNDEE, SCOTLAND

Report of APRON CHECKING COMPARISON TEST MADE IN OZONE CHAMBER

DAYTON RUBBER researchers found Dayco Aprons superior in a comparison test. All apron brands were exposed in an intensified oxygen chamber developing O_3 (ozone).

This test, simulating actual plant conditions in the O_3 chamber converted months to minutes and showed even the leading brands developing the spiderweb checking many "months" sooner than Dayton.

MECHANICAL VS. CHEMICAL—A NEW VIEW ON CHECKING

Air conditions in textile plants have changed greatly in recent years. We find greater turbulence of air over the cleaners, a marked increase in number of motors, plus motors of larger size, air conditioning and many other air factors. Yet Dayton laboratory research and field investigation find the checking problem should be studied in terms of mechanical, rather than chemical wear-and-tear. The new sharper angle of the apron and the machines with the new nose bars, the greater demands on machines all suggest research into synthetic compounds instead of the air conditions in the plants. Research into "rat tailing," frictional heat build-up—powerful enough to strip gears—and apron chatter promise sounder answers to apron problems than the negligible amounts of ozone found in the air.

DAYTON ATTACKS BOTH CHECKING CAUSES

Dayton researchers have as a result of this problem reformulated compounds not only to meet *chemical* conditions but also to cope with the newer *mechanical* conditions. Dayton researchers developed formulations for *lower* coefficients of frictions around the new narrow-nose tensors, yet more exacting coefficients on the apron surface for smoother more uniform yarn.

Auburn Holds Quality Control Clinic

SPOTLIGHTED AT THE RECENT CLINIC WERE BLENDING, TWISTS AND WEAVING TENSIONS

BLENDING, twists and weaving tensions were subjects of discussion at the Quality Control Clinic, November 21, at Auburn University. Held under the auspices of the Alabama Textile Operating Executives, the meeting featured talks on "Some Important Effects of Weaving Tensions," W. C. Knight; "The Correct Amount of Twist for Roving and Yarn," E. B. Taylor; and "The Blending of Cottons With Dissimilar Fiber Properties," William T. Waters, all of the school of textile technology, Auburn; and "Blending And/or Preblending," J. M. Cook, Geo. H. McFadden & Bro., Memphis, Tenn.

Some Important Effects Of Weaving Tensions

W. C. KNIGHT

THE results of the tests on fabrics woven at different tensions show that yarn tensioning during weaving definitely affects the characteristics of the fabric in the greige and in the Sanforized state. These tensions contribute to the non-uniformity of fabrics in any given type of fabric. Their effects are widespread and not associated with just one characteristic ("Weaving Tensions," W. C. Knight, T. B., March 1959)

The test results show that it would be impossible to expect to finish fabrics to the same width, with the same residual shrinkage and with a uniform number of yards per pound unless the conditions under which these fabrics were produced were uniform from loom to loom.

The effects of weaving tensions found on greige fabrics as the tension on the warp increased are: (1) the width decreases; (2) the construction increases both warp and filling-wise; (3) the weight per yard decreases and the yards per pound increase; (4) the warp crimp decreases and the shrinkage filling-wise decreases; and (6) the breaking strength of the fabric is decreased both warp and filling-wise.

The effects of weaving tensions found on Sanforized fabrics as the tension on the warp increased are: (1) the Sanforized width is increased; (2) the sley is slightly decreased and the picks per inch increase; (3) the weight per yard increases and the yards per pound decrease; (4) the warp crimp is increased and the filling crimp is decreased; (5) the shrinkage in the direction of the warp is increased and seems to have little effect on the fabric filling-wise; and (6) the breaking strength seems to be increased both warp and filling-wise.

In both greige and Sanforized fabric, the effects of increasing the tension on the filling seem to be slight.

It is quite interesting to note that some of the effects are reversed in the Sanforized fabric from those in the greige. This seems to be due to the additional strain the yarns are under in the fabric. These strains are released up to a point upon Sanforizing and in some cases actually are placed into the yarn in reverse.

The study covered one fabric. A three-harness sports denim. There is every reason to believe that different results might be obtained in other woven fabrics. Variations in yarn counts and heavy construction would certainly have varying effects on fabric characteristics.

Blending And/Or Preblending

J. M. COOK

THE blending of cotton is always a pertinent topic because of its very important influence on the successful outcome of processing cotton through the mill. The term "preblending" has rather recently come into usage and applies to the breaking open of bales of stock, processing them through opening and blending machinery and then rebaling the cotton into new bales. Some mills are currently doing this operation themselves. Some shippers are also preblending cottons.

By the nature of its operation, preblending must be considered the first step in manufacturing. Furthermore, the machining through which the cotton is to be processed and the end product that is to be manufactured should be known by the one making the blend. Unless this information is available, the average quality of the blend can drift off just as it can with original bales. A high level of confidence between the shipper and the mill is required if the shipper does the preblending. The object of the whole thing is to obtain a uniform product for use in the mill.

James Barnes of the Kendall Research Laboratories defines good blending as "the condition when all characteristics or qualities in a mill mix are represented in a cross-section of yarn." Note that this definition refers to the make-up of the end product—yarn—as a measure of the blend.

Barnes' definition could be more comprehensive by saying that we want the cotton, in lap form, to card uniformly; to draft uniformly on drawing; to run uniformly on roving frames; and to run well and produce a uniform yarn of optimum strength and appearance at the spinning frame.

Many influences and conditions that affect cotton quality today were not present 20 or 25 years ago. Furthermore, many of these present conditions affect the quality much more radically than those of years ago. What are some of these variables? A listing includes:

(1) Different fertilizers used by different farmers each year, and from year to year.

(2) Cultivating methods and procedures.

(3) Different insecticides.

(4) Defoliants.

(5) Harvesting differences. California, for instance, has almost 100% of its cotton machine picked. Travelling east to the Southeastern States, less and less cotton is machine picked. In the Carolinas and Georgia probably no more than 1 to 3% of the cotton is machine picked.

(6) Variations in ginning conditions.

(7) Variations in drying conditions in gins.

(8) Variations in cleaning conditions.

(9) Cotton varies according to the place grown on the stalk. Usually the bottom crop is longest. In many cases now, all of the crop is allowed to open and is picked at one time.

(10) Cotton ginned with different levels of moisture content.

(11) Government purchase of cotton has caused farmers to grow crops largely for the government. This too has caused more cotton two and three years old to be available for manufacturing. Different crop years also enter as a variable.

Variation in cotton is not confined to that found between bales. There is a very large variation within bales of American cotton. Beside fineness and strength variations, cotton also has different length distributions, differences in convolutions of the fibers, differently shaped fibers, and other variables.

To accentuate the need for good blending, note that bolls from the top part of the plant may have 25% of the fibers with $1\frac{1}{16}$-inch and longer staple. At the same time, bolls at the bottom of the plant may have 25% of the fibers with $1\frac{1}{8}$-inch and longer staple. Yet these fibers must be combined and drafted in a strand sufficiently uniform to spin without breaking.

Blending is of vital importance to the operation of the mill. I believe the blending operation is one through which many mills could make an appreciable saving that would be reflected in all other departments. The labor cost could be doubled in the opening with probably a much greater saving in spinning.

Suggested Procedure

A tried and proven blending procedure for satisfactory results in most cases from the regular mill lay-down is: (1) place behind each hopper feeder in the opening room no more than six or seven bales; (2) feed these six or seven bales into only the one hopper; (3) use ten pounds or less, if feasible, from each bale each time cotton is put into the hopper; (4) keep hoppers as nearly full at all times as you can; (5) know Micronaire and, if possible, Pressley of each bale in mix; (6) use cotton behind each hopper that averages about the same as your mix for Micronaire; that is, if you average about 4.2 in your mix, keep the cotton going into hopper averaging 4.2; (7) feed uniformly from all bales in the mix to insure more uniform blending; (8) use lay-down bales from four, five or more shipments to overcome differences in location of growth; (9) if feasible, taper off from one shipment onto another at all times.

The doffer roller or comb should be set as close as feasible to the spiked or lifting apron. If one is blending more than one grade, it is better to feed those bales of each grade into individual machines. Each hopper feeder should be checked periodically to see that one or two are not feeding faster than the others. In case some are, they should be adjusted.

When blending only is the objective, the machines should be of the type that affects the fibers as little as possible. If cleaning in the blending line is necessary, some machines that beat the fibers must be added.

Blending Cottons With Dissimilar Properties

WILLIAM T. WATERS

FUNDAMENTAL relationships between fiber and yarn properties have been fairly well established with the use of the improved and new test methods and instruments available. With this relationship established many mill men and research workers believe the next logical step will be in the direction of blending cottons with dissimilar fiber properties to improve processing performance, yarn quality and lower cost in some instances. This paper reviewed the effects of the more important cotton fiber properties on processing performance and product quality and presented a recapitulation of published work done in the field of blending cottons with dissimilar fiber properties.

The Correct Amount Of Twist

E. B. TAYLOR

THIS project took two forms: (1) a compilation of a bibliography on the twists required in roving and yarn; and (2) the processing and testing of cotton rovings and yarns with various twists. The processing consisted of producing 1.55 hank roving on a Saco-Lowell FS-2 frame with 10x5 package at periods of a year apart. Various twists were given the rovings with a different twist gear for every doff of 20 bobbins. On the first processing, the twists per inch ranged from 1.65 to 2.31. On the second processing the t.p.i. ranged from 1.15 to 2.31.

In addition to regular sizings the bobbins were tested on Belger roving tester, Resistiro-Rex roving tester, Uster evenness tester, and with manual pull. The rovings were spun into 20s yarn on a Saco-Lowell SG-1A spinning frame. Ends-down-per-thousand-spindle-hours were counted and the yarn was tested for evenness, strength, elongation, size and appearance.

A summary of results includes:

(1) The lower the t.p.i., the lighter the roving.

(2) The lower the t.p.i., the more even the roving.

(3) For testing the roving twist, the Resistiro-Rex automatic roving tester was far superior to the Belger roving tester.

(4) The Duo-Roth drafting system produced better yarn than the Shaw system in almost every comparison made.

(5) The yarn made while the travelling cleaner was operating was as good or better than the yarn produced with no blowing on the spinning frame.

(6) Considering all factors, by average, the best t.p.i. was found to be 1.59.

The Designing Of Pile Fabrics

A NUMBER OF AUXILIARY MACHINES ARE USED IN THE PRODUCTION OF PILE FABRICS—THE AUTHOR HERE CONSIDERS SOME OF THEM

By E. B. BERRY*

Chapter 2

Long Chain Quillers

Plush looms have two shuttles thrown simultaneously. Also the filling is generally replenished manually, by the weaver. Four shuttles are usually put on each loom—a top and bottom in the loom running; and a second set (one top and one bottom) ready to be inserted when the pair that is running is exhausted. Both are replaced at the same time. It never pays to replace one at a time, because the time lost, due to shuttling, would be excessive. Also each time the loom stops, there is danger of a start-up mark.

If two bobbins were filled with yarn, the yardage on each will be a little different because of the variation in yarn number, tension, etc. The bobbin which runs out first will govern when *both* shuttles are changed. Any yardage left on the other bobbin will be waste. The loom is equipped with electric feelers, or a filling clock stop motion so the loom will knock off when the bobins are exhausted. It is essential therefore, to measure the filling yarn, to be sure that all bobbins of the same yarn number have the same yardage on them. This measuring may be done on a long chain quiller. (See Fig. 15.)

Yarn is purchased on a ball warp, 378 ends. It is threaded through tension drums, opened out on a reel and each end of the 378 feeds onto a loom bobbin. Each bobbin is mounted on a spindle, which turns the bobbin. A carriage raises up and down, placing the yarn in filling wind on the bobbin. At a predetermined yardage, which will fill the bobbins, a lease comes up which is the signal to doff the quiller. In this way each of the 378 bobbins will have the same yardage.

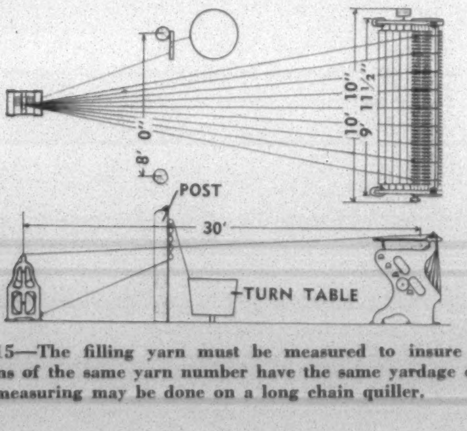


Fig. 15—The filling yarn must be measured to insure that all bobbins of the same yarn number have the same yardage on them. This measuring may be done on a long chain quiller.

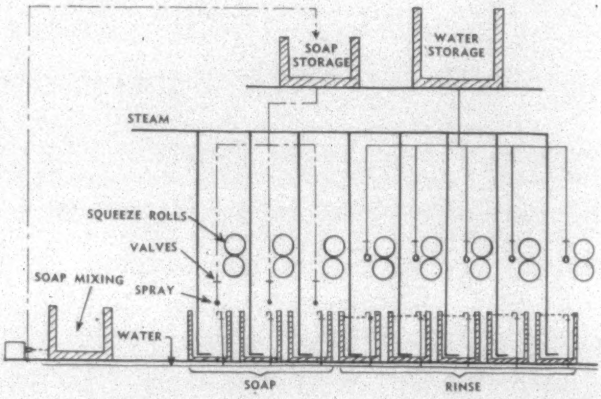


Fig. 16—This eight-bowl scouring machine can scour mohair plush at the rate of some 30 yards a minute.

Scouring

Any fabric containing animal fiber yarns should be scoured to remove the grease put on the raw stock to spin it. This may be done in a dye bath beck or kettle, which is a slow, costly operation. Open width, continuous scouring is ideal for a quick operation, but the volume of cloth scoured must be great to cover the initial investment of the machine.

An eight-bowl scouring machine is shown in Fig. 16. It will scour mohair plush at the rate of approximately 30 yards per minute. The first three bowls are for scouring, and the last five bowls for rinsing. A nip roll is provided at each bowl, which may or may not be used. Every bowl has its own steam line, with an individual valve. Each bowl has a water line to it with its own spigot. There is a flow back from the eighth bowl (last rinse) to the fourth bowl (first rinse).

Just past the last bowl is a slot vacuum extractor. This removes some water left in the cloth, and assists in the drying operation, if the cloth is to be dried immediately after scouring.

Coating

In order to have adequate pile anchorage, some pile fabrics must be coated. The material used may be liquid or a resin. There are two simple methods of application. Fig. 17 illustrates the most popular type. The cloth is fed,

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*Mr. Berry is an assistant professor in the department of fabric development at North Carolina State College School of Textiles.

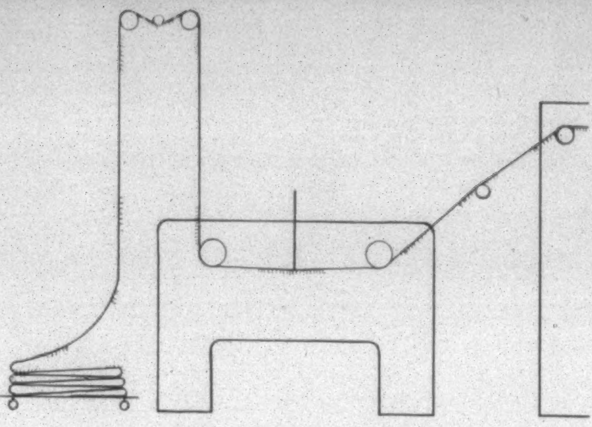

Fig. 17—In order to have adequate pile anchorage, some pile fabrics must be coated. The material used may be liquid latex or a resin. The most popular method of application is shown here. The cloth is fed, pile down, under a knife blade. A stream of latex or resin is fed on the back of the cloth, and as the cloth advances, the knife blade scrapes off the excess.

pile down, and goes under a knife blade. A stream of liquid latex or resin is fed on the back of the cloth, and as the cloth advances, the knife blade scrapes off the excess. This falls off the selvages on each side, into a barrel, and is pumped overhead into a feed tank to be used again.

From the coating machine the cloth goes directly into a dryer where the ruber is vulcanized. The cloth may be wet or dry as it goes into the coating machine. If the cloth is wet, it will probably take two dryers to do a good job of curing the rubber. The amount of ruber on the fabric will be governed by the percent solids of the coating compound, the speed of the cloth, the viscosity of the coating compound, the pressure of the knife or a combination of all these.

A second method is also used (see Fig. 18). This allows the cloth to pass through the coating machine face up. A box containing the liquid coating compound is kept full. A brush turns continuously in this box. As the brush picks up the coating material, it is then deposited on the back of the fabric. After coating the cloth is dried. It is more difficult to control the amount of coating put on the cloth in this method than in the method shown in Fig. 17.

(Next Month, Velvet and Velour)

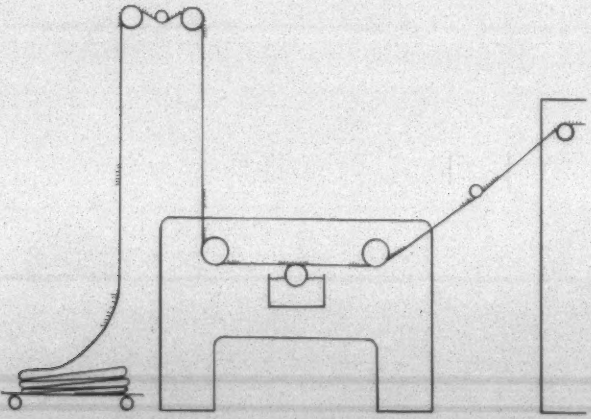

Fig. 18—A second method for applying latex or resin to pile fabrics allows the cloth to pass through the coating machine face up. A box containing the liquid coating is kept full. A brush turns continuously in this box. As the brush picks up the coating material, it is deposited on the back of the fabric.

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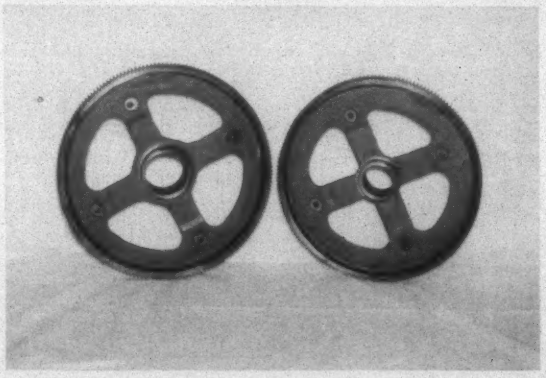

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Research Frame Developed

NEW UNIT BUILT TO U.S.D.A. SPECIFICATIONS BY F. A. YOUNG MACHINE CO.

HOW would you like to have a spinning frame with a range of drafts from 8 to 650? With twists from 6 to 85 t.p.i.? Delivery was made recently on just such a frame. It was built by F. A. Young Machine Co. for the U.S.D.A.'s Spinning Laboratory at Knoxville, Tenn. Basically a standard Vertical Y frame, this new research model has been modified to meet specifications drawn by the laboratory's research team.

What's it for?

According to C. B. Landstreet, cotton technologist at the Knoxville lab, the frame is to be part of a highly specialized processing line being developed at the laboratory. The line is being set up in an effort to increase the efficiency of spinning tests the lab uses in evaluating cotton varieties. Initial investigations using the new frame will be studies of spinning tension, draft proportionment and accelerated end-breakage rate tests.

The new research frame has a five-roll drafting system with two apron sections and spins yarn either direct from sliver or from roving. The frame has $4\frac{1}{2}$-inch gauge with 12 spindles per side. Ring size on the unit is $1\frac{1}{2}$ and/or 2 inches.

When being used to spin yarn directly from sliver, all five rolls of the frame will be in operation. The lower drafts, (from 150 down) will be used to produce yarn numbers from 4s to 30s. Drafts of 150 and up to 650 will be used to produce yarn counts up to 200s. The laboratory specified that the frame be capable of direct sliver spinning to increase the efficiency of the production of test samples.

Spinning yarn from roving is done on the frame with three rolls in operation. To change the frame from direct sliver spinning to roving spinning the back two lines of top rolls are removed and the steel roll drive is disengaged. Roving is creeled in standard umbrella creels.

The laboratory specified the frame must be capable of three-roll spinning with roving creels so the unit may be used in tests with results comparable with conventional equipment.

The drafting element is mounted perpendicular to the breast beam providing straight-line spinning from the back roll to the thread guide. Roller and ball bearings are used throughout the frame including bottom steel rolls. Weighting is applied to the front two top rolls using levers. Weighting is applied to the other three top rolls with simple spring arrangement from the top arm. The back three top rolls are set by sliding the bearing in the top arm slot. Fiber control is supplied by a double-apron cradle and pin arrangement and a condenser system.

Other equipment on the research spinning frame includes: (1) ten-inch steel tape drive pulleys; (2) cotton tapes; (3) Parks-Cramer SpinSaVac vacuum ends-down collectors; (4) Kluttz Lubri-Cased rings; and (5) Hartford anti-friction spindles. All five steel rolls are one-inch in diameter.

Unique features built into the research frame include:

(1) **Draft gearing**—Drafts and draft constants are easily changeable with a minimum amount of gear setting. Each of the three drafting zones has three draft constants.

(2) **Twist gearing**—The frame has dual twist gears and three twist constants calculated to give a range in twists from 6 to 85 t.p.i. The 85 t.p.i. would be used when spinning 200s with a 6.00 twist multiple.

(3) **Cap bar rod**—The cap bar rod is an integral piece of the roll stand. This means provision is made for the adjustment of the back three lines of top rolls without interfering with the adjustment of the front two lines. The setting of the two front steel rolls is fixed and can handle cotton fibers with staple from $\frac{7}{8}$ to $1\frac{9}{16}$-inch.

(4) **Roll settings**—The frame is capable of running the wide range of staple lengths with a minimum of roll setting. This feature results from the use of precision cradle pins that are supplied with openings from 3 to 12 m.m. in increments of $\frac{1}{2}$ m.m.

(5) **Creel**—The frame has standard umbrella-type creels for use when spinning with roving and special driven lifter rolls for direct sliver spinning. Sliver may be supplied either from small cans mounted on the frame or from large cans located on the floor.

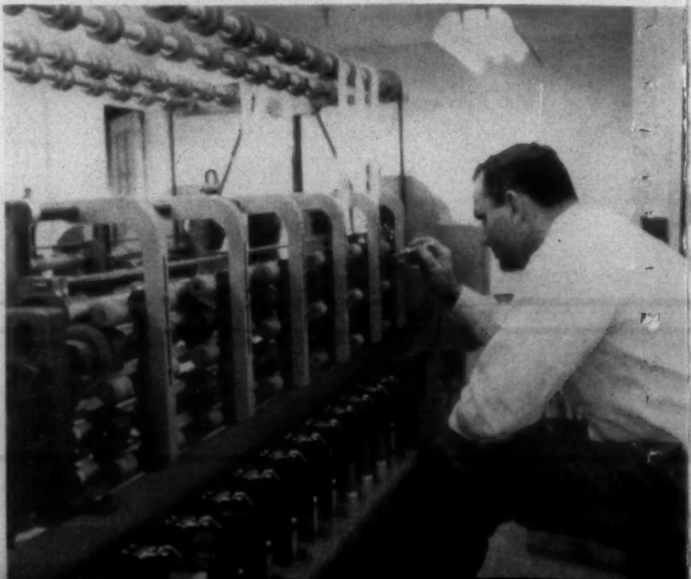
(6) **Vari-speed spindle drive**—The speed of spindles can be adjusted, either higher or lower, while the frame is in operation with the use of a Lewellen variable speed drive. The range of spindle speeds is from 4,000 to 18,000 r.p.m.

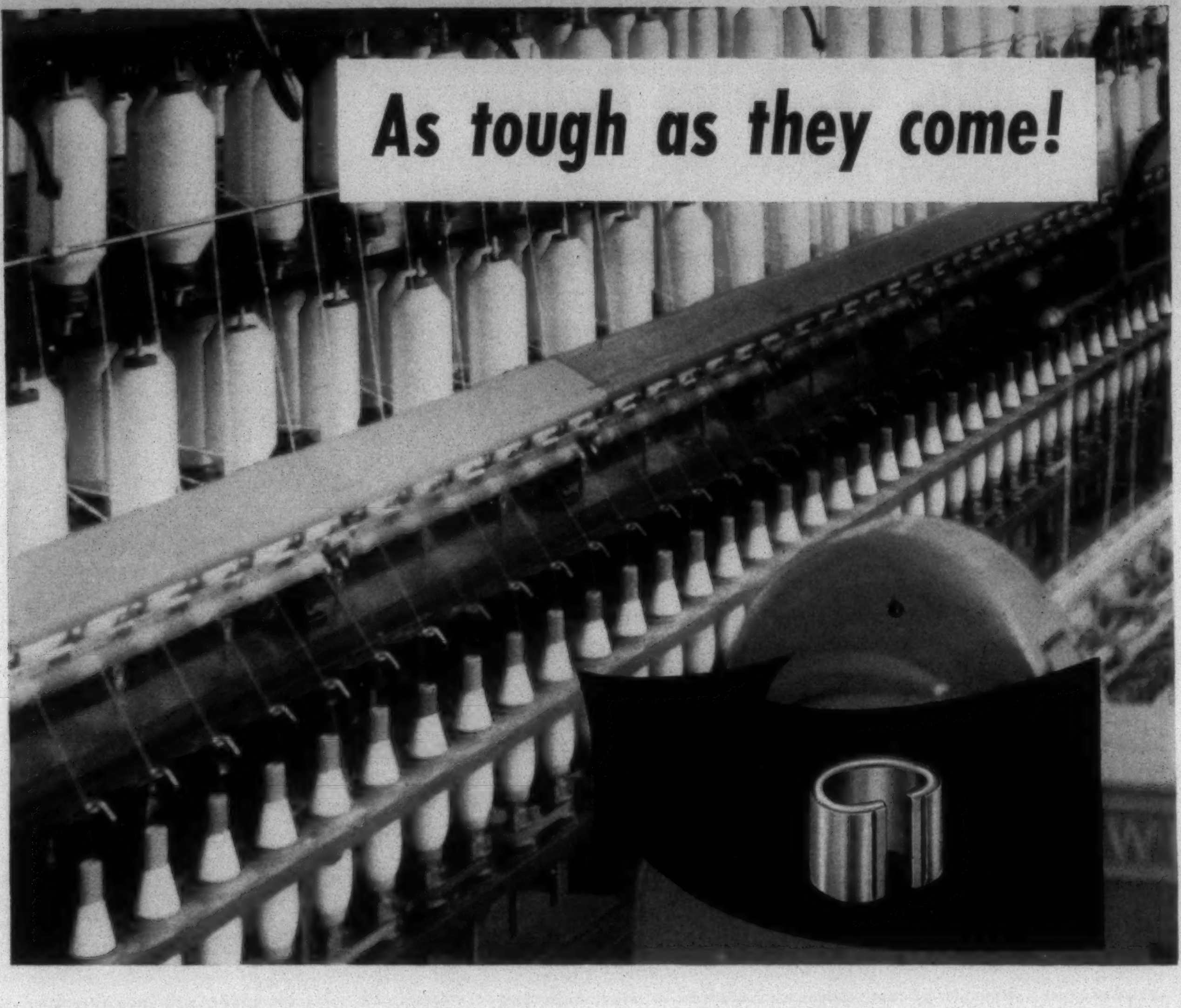
(7) **Motor**—The frame has the new Fairbanks-Morse pancake-type 5 h.p. motor.

(8) There is not an oil point on the frame. All bearings are anti-friction. A few drive bearings will have to be greased once per year.

Built for the Knoxville lab strictly as a research tool, the frame may well offer other features (extreme ranges of drafts, twists and speeds) practical for application in production operation.

The research spinning frame has a five-roll drafting system with two apron sections and spins yarn directly from sliver or from roving. Sliver may be supplied from small cans on the frame or from large cans on the floor. Roving is creeled in a standard umbrella-type creel.





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Swift Mfg. Co. Builds Addition

THE THIRD AND FOURTH STORIES HAVE BEEN ADDED TO A WING OF THE MAIN BUILDING AND NEW OR MODERNIZED EQUIPMENT IS BEING INSTALLED

MODERNIZED preparatory processes, a new type spinning changeover, and new slashers are the highlights of a recently completed 30,000-square-foot addition built by Swift Mfg. Co., Columbus, Ga. The mill is currently in the process of completing the installation of new or modernized equipment. The addition consists of 15,000 square feet each on the third and fourth floors of an existing two-story wing on the main mill building.

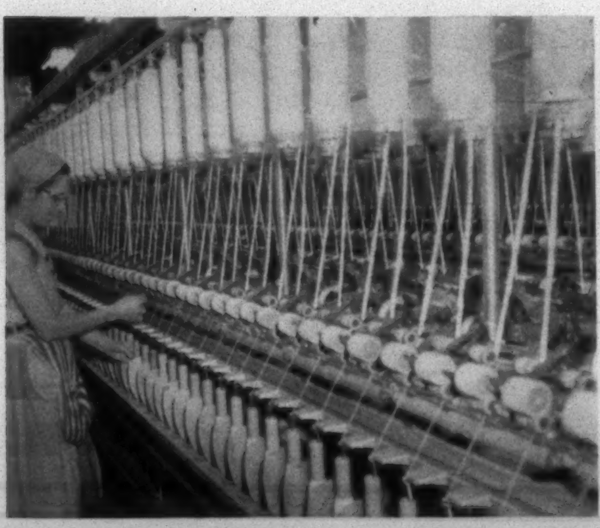
New equipment includes: (1) seven new Cocker multican slashers; (2) Barber-Colman drawing-in machine; (3) 18 x 42-inch cans on 100 cards; (4) 36-deliveries Saco-Lowell Versamatic drawing; (5) Saco-Lowell FS-2 roving frames; (6) Cole Engineering Co. spinning changeovers; and (7) various accessory equipment such as new Parks-Cramer spinning frame cleaners and floor sweepers.

Future modernization and expansion plans call for the installation of 28 120-inch Draper XL looms for making wide rug backing. These wide looms will be supported by various types of wide equipment including a 120-inch Cocker slasher and a 120-inch tenter frame.

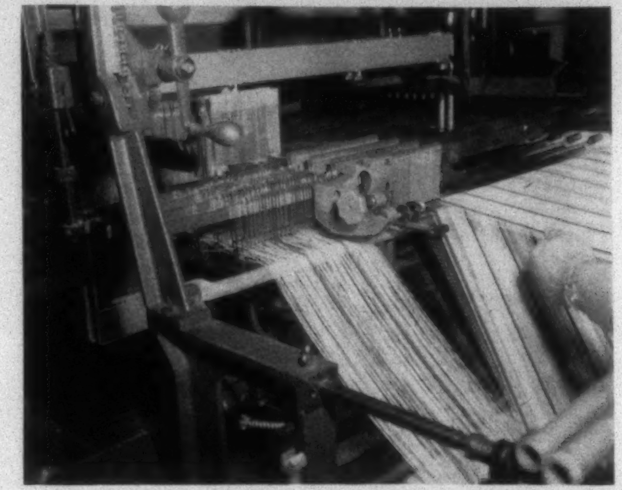
Picker Room

Swift Mfg. Co. runs ten Saco-Lowell one-process pickers in its picker room. The pickers have three beater sections and deliver a 17-ounce-per-yard lap which weighs a total of 60 pounds. Tolerance in total lap weight allowed by the mill is plus or minus ½ pound.

The Strandberg Engineering Co.'s Moisture Monitor is used on the pickers to assure an equal amount of cotton in each lap. Swift is experimenting with making 75-80 pound laps on its pickers. The heavy laps will be handled with the aid of a lap truck.



The company's spinning frames are being modernized with dual apron-dual nose bar drafting changeovers made by Cole Engineering Co. With the new drafting element but before modernization of roving and drawing, the mill's yarn break factor increased from 1,840 to 2,110 and ends-down-per-thousand-spindle-hours dropped 15-20%.



The modernization program at Swift Mfg. Co. has included the installation of a Barber-Colman 66-inch Model G.S.H. drawing-in machine.

Swift's cards net 21 pounds per hour. The 18-inch coilers installed on 100 cards were made by Saco-Lowell and cans hold some 42 pounds of 60-grain sliver. The mill formerly used 14 x 36-inch cans which held 18 pounds of stock each. The 42-inch high cans are doffed from cards and loaded onto a truck which holds one creel of cans for one drawing delivery. Card sliver weighs 60 grains per yard.

Drawing Modernized

Swift uses only one drawing process. The 36 deliveries of new Saco-Lowell Versamatic drawing run at 422 feet per minute. Sliver uniformity is exactly 50% better with the new high speed equipment. The average Uster quadratic integrator reading on the sliver is 3.5% C.V. Versamatic delivers drawing to 16 x 42-inch cans holding some 40 pounds of 60-grain sliver. A pre-arranged number of yards is put in the drawing cans through use of a yardage counter built into the frame. Frames are creeled one delivery at a time.

The roving process at Swift consists of nine Saco-Lowell FS-2 frames with 13½ x 7-inch bobbins. The roving package carries a pre-arranged number of yards of roving on the bobbin. A full roving package holds 90 ounces of stock. The mill formerly used a 12 x 6-inch package on H & B frames. The old package held 40 ounces of roving. The mill makes two counts of roving .50 and .70 hank.

Some 19,000 spindles in Swift's spinning room are being changed from H & B drafting elements to the Cole dual apron-dual nose bar drafting system. The drafting

C. H. Williams is president of Swift Mfg. Co.

system has neither nebs nor cradles and has adjustable spring weighting for top rolls. A new system of roll alignment is also included in the unit.

The new drafting system has enabled the mill to increase its yarn break factor from 1,840 to 2,110 on 8.80s spun from 29/32-inch low middling cotton carded at 21 pounds per hour. The count runs at 155 revolutions per minute of the one-inch front roll on three-inch rings. The traveler speed is 5,400 feet per minute. Evenness of the yarn has improved 17½% over the old method of spinning. Yarn grade has improved one full grade. Ends-down-per-thousand-spindle-hours dropped 15-20% before the installation of new roving and drawing. The E.D.P.T.S.H. improvement is due to the Cole drafting system alone. With the aid of new preparatory equipment a considerably greater improvement in running conditions was made.

The openness of the Cole drafting element makes mechanical cleaning more efficient, according to the mill. Naturally less manual cleaning is required. New Parks-Cramer frame cleaners and TravelVac vacuum floor sweepers are used on the modernized spinning frames. The frames also have Parks-Cramer SpinSaCreel open creels.

The mill uses Barber-Colman spooling and warping equipment.

The seven new Cocker slashers (for complete description see October 1959 TEXTILE BULLETIN, page 47) installed at the mill operate at high speeds. Warps of 2,562 ends of 8.80s yarn runs at 55-60 yards per minute. The slashers have multiple cylinders and double size boxes. Cylinders operate at 50 pounds steam pressure.

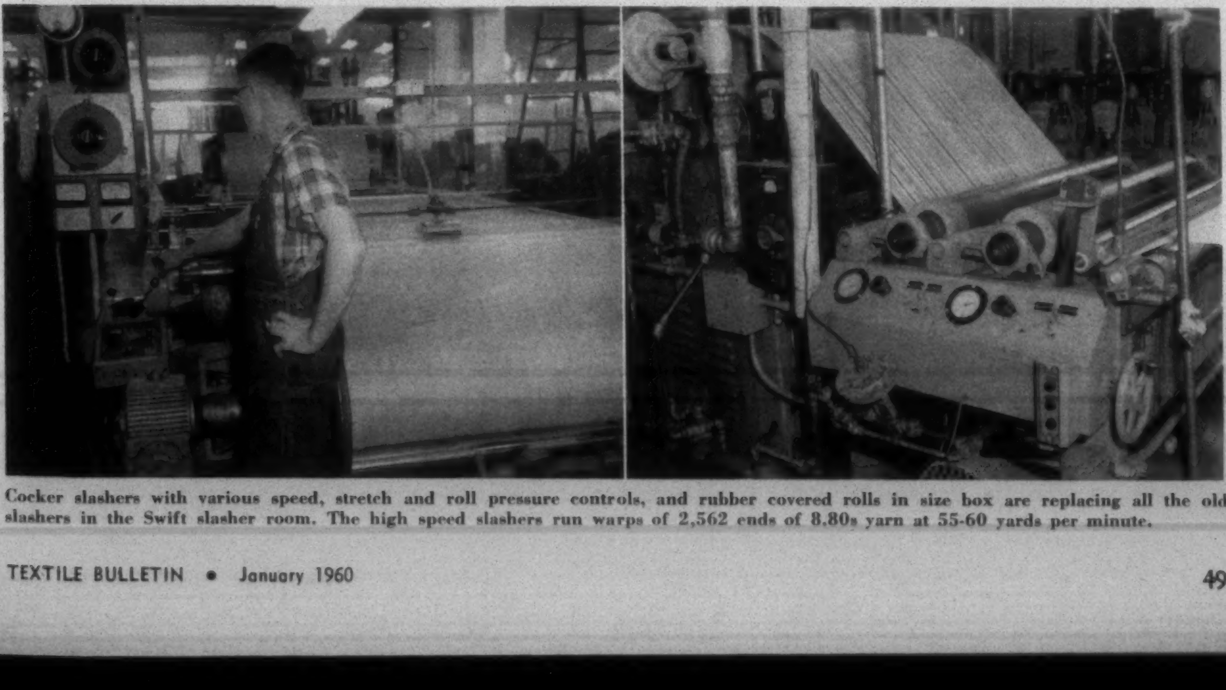
The new Barber-Colman drawing-in machine installed by the mill is a 66-inch Model G.S.H. The mill expects to draw some 100 fancy ticking, upholstery, drapery and plain warps per week with the machine.

Specialty Weavers

Although Swift is a big mill—40,000 spindles and over 1,000 looms—it has managed to keep its production on a specialty basis. All sorts of fabrics—such as industrial fabrics, leno bag goods, draperies, upholsteries, denims, automotive fabrics, shirtings, suitings, garment goods and jacquard fabrics—are made by the mill. A listing of the company's weaving equipment shows why this versatility is possible.

No. Looms	Type Loom and Fabric
30	C & K C-4 with Staubli heads making upholstery and drapery
100	C & K W-3, some with jacquard heads making automotive fabrics and drapery
144	60-inch Draper Model K dobby making industrial fabrics, leno bag goods, drapery and upholstery
44	70-inch Draper X-2 making fancy ticking and industrial fabrics
182	Draper Model K dobby making industrial fabrics and suitings.
90	45-inch C & K C-4 and C-5 making shirting and suiting
42	Draper XP making fancy ticking, upholstery and drapery
389	40-inch Draper Model E and K cam looms making denim and garment goods
26	C & K C-4 with jacquard heads making upholstery and drapery fabrics
24	68-inch C & K C-4 making upholstery and drapery fabrics

C. H. Williams is president of Swift Mfg. Co. E. A. Bentley is vice-president. The mill's superintendent is W. F. Ziegler and manager of standards is George H. Bass.



Cocker slashers with various speed, stretch and roll pressure controls, and rubber covered rolls in size box are replacing all the old slashers in the Swift slasher room. The high speed slashers run warps of 2,562 ends of 8.80s yarn at 55-60 yards per minute.

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The Loomfixer And His Job

Part Fourteen

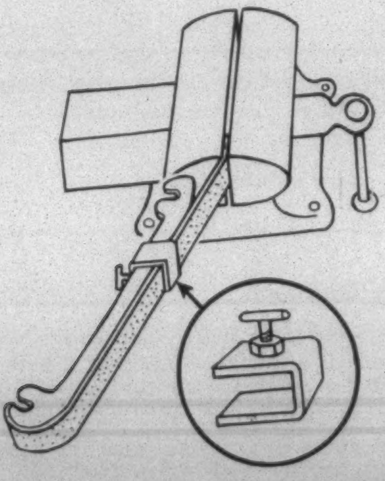
COVERING THE SHUTTLE BOXES IS A JOB THAT REQUIRES SKILL AND KNOW-HOW

By **WILMER WESTBROOK**

SHUTTLE boxes come in many sizes and shapes. Most of them have the contact surface covered with leather. The loomfixer should keep at least one pair of boxes in his work bench, ready for installation, unless a supply of refinished boxes is kept in the stock room or other centrally located place.

Some mills have the boxes covered in a shop. In other mills each loomfixer covers and refinishes his own boxes. There are arguments pro and con for each method. Proponents of the shop method claim: (1) fewer boxes will be needed because each loomfixer swaps a worn box for a refinished one and does not horde them in his work bench; (2) a less-skilled and lower paid employee can refinish the boxes as well as the loomfixer can do the job; (3) the loomfixer can spend the time fixing and adjusting looms that would otherwise be spent on the less complex job of covering boxes; (4) a more complete set of tools and accessories can be assembled in the shop than can be made available for each loomfixer; (5) the shop operator can lay his work out in assembly-line fashion and does not have interruptions such as occur on the loomfixer's job.

Those who claim that the loomfixer is the logical one to cover and refinish the boxes give these reasons: (1) the loomfixer, being the one responsible for the installation and maintenance of the boxes, will do a better job of covering them; (2) since the loomfixer covers the boxes between repair jobs the labor for this work actually costs the mill nothing; (3) the loomfixer can keep refinished boxes in his work bench and does not have to lose time going to the shop every time he needs one; (4) there is less down-time because the loomfixer has a refinished box at hand when he removes the worn one and does not have to let the loom stand idle while he goes to the shop to exchange it; (5) there will not be the bottleneck and delay that often happens when a number of loomfixers need the same kind of box at the same time and the shop operator cannot cover them as fast as they come in.



A vise is used to pull the leather tight on the shuttle box while a clamp is attached to hold it until the screw can be inserted. The clamp can be made of scrap iron with a nut welded in place to reinforce the threaded hole.

Whether the boxes are covered by each individual loomfixer or by a trained shop man, it is a job that requires skill and precision. The first step in refinishing a box is to remove the old leather. This leather is usually attached with both screws and glue or cement. Remove the screws and strip off the old leather. Scrape the adhesive and residue from the face of the box. This work is best accomplished by placing the box in a vise, face up.

A scraper can be made by sharpening one side of an old file, a power hacksaw blade, or a binder spring. Rub the surface with sandpaper or emery cloth to get it thoroughly clean.

Apply glue or cement with a paddle or brush. A rather heavy coat of adhesive is best unless a thin coat is also applied to the leather covering.

The leather should be cut slightly wider and longer than the box. Attach one end of the leather as soon as the glue or cement becomes "tacky." Place the loose end of the leather in the vise and use the side of the vise as the fulcrum and the box as a lever to stretch the leather tight. Place the box clamp on the box to hold the leather in place while the end is trimmed and a hole punched in it.

A good box clamp can be made by heating and bending a piece of flat iron in the shape of a U. Drill and thread a hole in one side and insert a bolt with a knob or handle.

To locate the position for the screw hole in the end of the leather, place the box in the vise and, with the leather in the described position, tap it with the hammer hard enough to make an impression from the screw hole in the box. Punch a hole in the leather and insert the screw.

Turn the box over in the vise, leather side up, and rub it firmly with a hammer handle or other smooth object to seat the leather firmly on the metal and make a good bond.

Let the glue or cement dry for several hours, if possible, before the leather is trimmed. Trim the leather flush with the edge of the box with a slight bevel on the outer edge.

The right-hand box of a loom equipped with a Stafford thread cutter has a long center cut-out and it is best to trim the covering on this box before the glue or cement sets. Wrap the box tightly with string to hold the covering in place and insure a good bond. A sharp knife or band saw can be used to trim the leather.

When the box has been trimmed and the glue or cement is dry, place the box again in the vise, leather side up. Rub the cut edges of the leather firmly to smooth the fibers and round the edges. Polish the finished box with tallow or a prepared leather dressing and it is ready for use.

If the box is to be stored, keep it in a cool, dry place. Moisture or excessive heat will destroy the bond between the leather and the box and will cause the leather to deteriorate.

Planetary Draft Gearing For Spinning Frames

PLANETARY GEARING PROVIDES A SIMPLIFIED MEANS OF INCREASING DRAFTS

By ROBERT RULON MILLER
and WARNER H. TABOR*

CHANGEOVERS on spinning frames are usually purchased to increase the draft of the sliver presented to the top rolls, as well as to insure other important improvements such as elimination of lubrication, longer periods between cleaning, closely concentric rolls for stronger, evener yarn, and lower maintenance cost, etc. One or many factors, all involving a savings in yarn cost, influences the mill towards investment in drafting modernization. With this article, we are primarily interested in a changeover that will allow a substantial increase in draft, thus requiring new draft gearing.

Those conversant with the drafting mechanisms of all types of spinning frames know that the principle entails drawing fibers between pairs of rolls, the front pair rotating many times faster than the rearward pair. If the rear pair of rolls are turning at 10 r.p.m. and the front pair at 150 r.p.m.—15 times as fast—we have a draft of 15. To increase this draft, either the front rolls must turn faster, or the rear rolls turn slower, or both. There are limitations on the maximum speed of the front roll delivery imposed by the maximum speed of the traveler on the ring so, ordinarily, drafts are increased by retarding the speed of the back rolls.

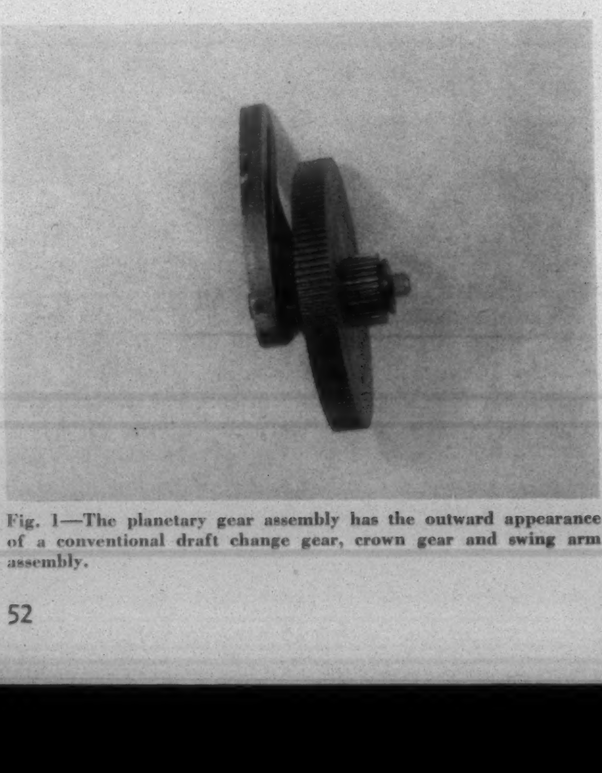


Fig. 1—The planetary gear assembly has the outward appearance of a conventional draft change gear, crown gear and swing arm assembly.

Driving Force

The mechanical force for turning the drafting rolls of a spinning frame comes from an electric motor—probably at the far end of the frame, through the spindle driving cylinder under the frame, to the head-end gearing, and up to the two sets of draft gearing on each side of the head-end of the frame. Draft gearing designed for shorter draft frames, such as the old Roth system, is not capable of delivering the wide speed differences required between front and back rolls. For example, conventional Roth gearing was made with a maximum draft constant of 741, limiting drafts to somewhat over 20. Saco-Lowell's Duo-Roth changeovers for existing frames can draft over 30, using draft constants over 1,000. Double apron Roth changeovers manufactured by Dixon Corp. can do likewise and, in addition, through the use of planetary gearing, any draft constant can be designed into the changeover gearing to provide any over-all draft required.

The draft constant is a factor used to simplify work in the mill. The constant is obtained by using 1 in place of the number of draft gear teeth in the regular draft equation. This draft equation is:

$$\frac{\text{Back roll gear} \times \text{crown gear} \times \text{front roll circ.}}{\text{Draft gear} \times \text{front roll gear} \times \text{back roll circ.}} = \text{Draft}$$

Once the draft constant is found by substituting 1 for the number of draft gear teeth in the formula above, the constant is used to determine the number of teeth in the draft gear as follows:

$$\frac{\text{Draft constant}}{\text{Draft}} = \text{teeth in draft gear}$$

Planetary Gearing

Planetary gearing, as used in draft gearing on a spinning frame, is merely a simplified means of reducing the speed of the drive as received from the head-end, so as to decrease the speed of the back roll, thus increasing the difference in speeds between the front and back rolls, and resultantly increasing drafts.

An assembled planetary gear appears, on first glance, to be identical with the usual crown gear and, externally, this is practically so. Fig. 1 shows a planetary gear as-

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*President and vice-president in charge of engineering (respectively) at The Dixon Corp., Bristol, R. I.

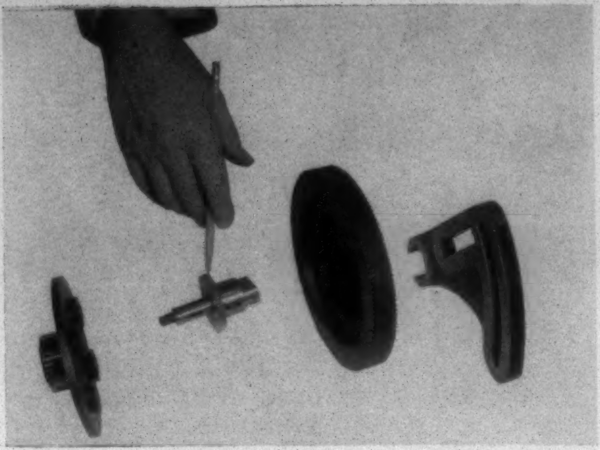

Fig. 2—When disassembled the planetary draft gear assembly reveals *(left to right)* (1) draft change gear; (2) four planet gears attached to the draft change gear plate; (3) internal sun gear (marked by pencil); (4) crown gear with external sun gear on inside; and (5) swing arm.

sembly, which appears as a draft change gear (small gear on right), crown gear (large gear), and swing arm (on left). What appears as a normal crown gear is actually a crown gear cored out to receive other parts internally. The same gear is shown disassembled in Fig. 2, the draft change gear being at the extreme left of the picture and the swing arm at the extreme right. Internal gearing consists of the internal sun gear, marked by the pencil, the four planet gears attached to the draft change gear plate, and the external sun gear inside of the crown gear. Such gearing is not always designed exactly the same way, although the principle is identical. Fig. 3 shows the internal sun gear inside and attached to the crown gear at the right of the picture, the external sun gear to the left, and in the middle, held by hand, the planet gears fixed to the shaft, which supports the draft change gear.

Fig. 4 shows a cross-sectional view of the planetary gear assembled with the swing arm (16) and draft change gear (15). Fig. 5 shows a view of the same gear, laid flat, and a cross-sectional view of the crown gear.

In Fig. 5 the three sets of gears inside the usual crown gear are shown: a pair of planetary gears (P) (only two shown for illustration purposes); internal sun gear (S_I); and external sun gear (S_E). Each gear has an arrow indicating direction of rotation. None of these are visible when assembly is complete. There is a constant basic relationship between the number of gear teeth of these three gears. The total number of teeth in two planetary gears (P), plus the number of teeth in the internal sun gear (S_I), must equal the number of teeth in the external sun gear (S_E). Therefore:

$$2P + S_I = S_E$$

Speed Reduction

The formula for the speed reduction (SR) is an inverse ratio between the number of teeth in the external sun gear (S_E) divided by the number of teeth in the internal sun gear (S_I) plus one, or:

$$SR = \frac{1}{\frac{S_E}{S_I} + 1}$$

Dividing the speed reduction obtained above (SR) into the old draft constant (C_o) on the frame gives the new draft constant (C_n) obtained with the planetary gear, or

$$C_n = \frac{C_o}{SR}$$

To explain the action of the gear, the round plate joining the planetary gears to the shaft, shown held by hand in Fig. 3, is depicted as an arm (R) in Fig. 4. This arm is fixed to shaft (A). The cross-sectional view, Fig. 5, shows shaft (A) fixed to arm (R) in dotted cross section. The external sun gear (S_E) is held stationary by attachment to a rigid section of the frame but the internal sun gear (S_I) rotates clockwise, driving the planet gear (P) counterclockwise, thus forcing the arm (R) and shaft attached to it to move clockwise. Thus, the input at the crown gear teeth turns in the same direction as the output at the draft gear teeth.

Speeds And Loads

All of the above is nested inside the crown gear, yet the size and strength of the component parts are sufficient to carry the loads and speeds required of them. If the crown gear turns at 30 r.p.m., the planet gears will only turn at 35 r.p.m. Four of these planet gears carry the load on ½-inch diameter shafts. The number of teeth in the planet gears varies from 18 to 30, depending on draft constant required. Crown gears and external sun gears are specifically annealed cast iron; internal sun gears are hardened steel, as are the planet gears. Run-out of the gear assembly is held to low tolerances but since the planetary gear affects back roll operation only run-out is not a critical factor. The whole interior of the assembly is packed with non-fluid grease. Regreasing is done through an alemite fitting shown as No. 17 in Fig. 3. The gears should be regreased approximately monthly.

Dixon Corp. has planetary draft gears in operation in five different mills on over 150 frames. No failure has been reported due to overload, wear, design, etc. Initial installa-

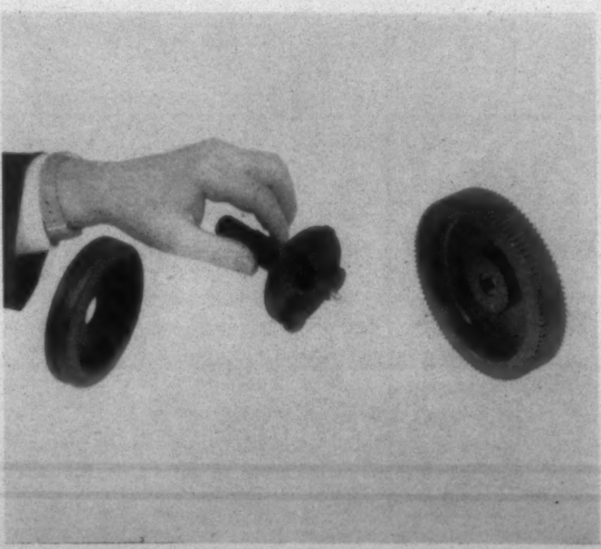

Fig. 3—The internal sun gear inside and attached to the crown gear is shown at the right. The shaft, held by hand in the center, supports the draft change gear, draft change gear plate and the planet gears. The external sun gear is shown at the left.

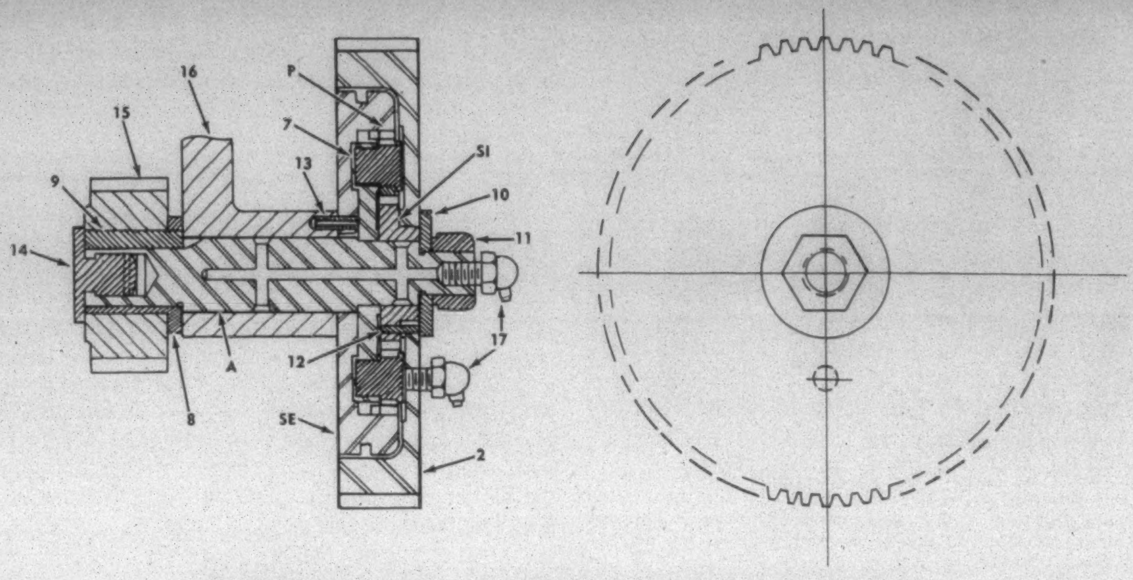

Fig. 4—Cross-sectional view of planetary gear assembly (see text for legend).

tions were on short frames of not over 252 spindles, but results have been such that the gearing is now used on all lengths of frames, and is proven adequate for any loads required of gears on all types of cotton system spinning.

Using the Lewis Gear Formula[1], it is mathematically possible to load one tooth of the small sun gear up to 98.3 pounds. Actual load on this gear is 22.8 pounds. This actual load was figured for a 312-spindle, 3½-inch gauge frame, with 16 pounds total weight on the middle roll and 15 pounds on the back roll. The frame had 1-inch bottom steel rolls with ¾-inch roll journals in cast iron stands. Draft gearing included a planetary type crown gear, a 104-tooth back roll gear, and a 42-tooth draft gear.

Under the above conditions, there was a 4.3 to 1 strength safety factor on the smallest tooth in the planetary gear chain.

Why Planetary?

Why use planetary gearing in place of ordinary double compound draft gearing? Basically, planetary gearing is less expensive to build and quicker to install. It can be fitted into the present space allowed for draft gearing and it eliminates the need to cut through into the head end of the frame to install the multiple compound gears usually required.

Planetary gears have been used on both double apron Roth and Casablancas type frames and are equally adaptable to the very oldest as well as the newer frames. The design of the planetary gear is individually laid out for each application, depending on the old gear construction and new draft constant required.

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[1] Page 955, *Mechanical Engineer's Handbook* by Lional S. Marks, Fourth Edition.

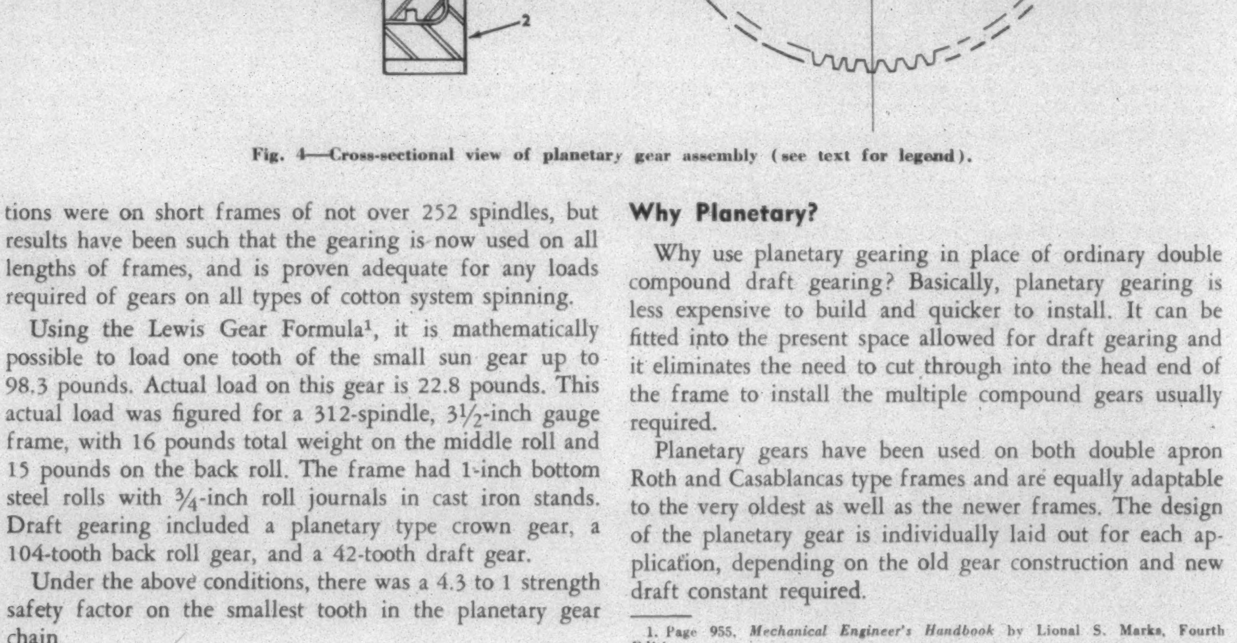

Fig. 5—Cross-sectional view of crown gear with external and internal sun gears and planetary gears (only two shown for clarity). When the crown gear (C) moves in a clockwise direction, the planet gears (P) move counter-clockwise, the external sun gear (SE) is stationary, and the internal sun gear (SI) moves clockwise.

S.T.A. Members Discuss Spinning

The following transcript is from a group discussion on spinning. The discussion was a feature of the Fall meeting of the Eastern Carolina Division of the Southern Textile Association. The meeting was held October 31 at the School of Textiles, North Carolina State College. Marion B. Allison of Cone Mills Corp., Hillsboro, N. C., served as moderator for the group.

Chairman: You have driven here in the rain today to learn something. The way to learn is to participate in the discussion. If you came to get all the information you can and to go back home without divulging any of your own, why, I hope you don't get much. I don't know all the answers, but I see men in this audience who do have the answers. I think we can get your questions answered to your satisfaction and I'm sure you'll hear about some experiences you might have had. That's what we want.

Question: What experiences have you had with high speed rings?

Answer: I have Draper, Whitinsville and Kluttz rings. We have run some of them for over two years. All of them over one year. So far we are having very good results. At the present time we are changing travelers about every two weeks. The present traveler speed on our warp spindle is in the neighborhood of 6,900 feet per minute.

Question: Tell us something about the high speed ring.

Answer: (supplier) Our high speed rings are given a heat bath in molten sulphur. This impregnates the steel with sulphides. Actually, this eliminates galling or sticking of metal on the ring from overheated travelers. It is similar to the use of sulphur cutting oils in machine tools. With sulphides on the ring we are getting higher traveler speeds. The rings start up much easier. The bath leaves a form of dry lubricity on the surface of the ring. This lubricity is not simply a surface coating but penetrates into the steel about five to ten mils. We now have over 2 million of these rings running, so they must be pretty good.

Question: Have they been running long enough to tell how long they are going to last?

Answer: The wear factor on steel with this lubricating treatment is well over 25% greater than steel which has not been treated. The ring is wear tested in a testing machine between two V-blocks and run under 70 pounds pressure. An untreated pin will break down in about two seconds. We can run a treated pin about ten minutes. If there is no break down or galling after ten minutes, we consider that we have good penetration of the sulphides in the steel. I am afraid the rings are going to last too long!

Question: How about the breaking-in period?

Answer: The breaking-in period is practically nothing. We just run the first traveler 45 minutes or an hour. We remove that traveler and wipe out the rings. We run the second traveler 12 to 18 hours and wipe out rings again. After that, under normal conditions, you can just let them go.

Answer: I have broken in about 40 to 50,000 rings in my time. I always break in a ring with the weight traveler we are going to run and the spindle speed we intend to use. Then we follow about the same procedure noted in the last answer. We have had very good results with that.

Answer: I think the main thing in breaking in new rings is keeping the ring flanges clean. The surface of a ring is, although apparently smooth, microscopically rough.

Answer: We are running 6,400 feet per minute traveler speed but don't have high speed rings. Our trouble is that we can have a frame running nine ends-down-per-thousand-spindle hours and another right next to it with 30 e.d.p.t.s.h. Same yarn count, speed, settings, etc.

Answer: Your problem might be in the setting of the traveler-cleaners. We run into this quite often.

Answer: I think that I would swap rings on the frames running nine and 30 e.d.p.t.s.h. If the bad running frame did not improve, then I would know the trouble was in the separators or drafting element or air movement. This would eliminate ring and traveler problems.

Question: What has been your experience with plated travelers?

Answer: We have been using them and they have held up pretty well.

Question: What is the purpose of the plated travelers?

Answer: (supplier) We are not in a position to make any definite claims for plated travelers. We have been making them for about two years now. In one place they will run with very good results and another will not be so good. We have been told that they improve ends-down and quality. We have been successful, however, in the ones we are making.

Answer: We worked with nickel plating on rings. The same plating goes on travelers. Plating does smooth out the surface of travelers.

Answer: The biggest advantage of plating travelers is getting a better start up of new travelers. Actually nickel is softer than the steel in rings and the travelers wear at about the same rate.

Answer: You do get a certain amount of lubrication from the platings.

Answer: We have been running plated travelers in our plant and are satisfied with them. They cost more but they last longer. You do have to run a little heavier traveler and I think that is where you get longer traveler wear. The heavier travelers have more stock in them and wear longer. We have been using them for about a year and are solid on them now. I do know that plated travelers are smoother and you spinning men know you get set on something and you are afraid to get off it. You don't want to be moving about. It looks like I am stuck with plated travelers. I like them and I think we will continue to use them.

Answer: We have found that high twist yarns will cut the travelers before the ring does. We think a lot of people are having trouble with this and are not realizing it.

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Plated travelers may run real well with knitting twist yarns while those with high twist yarns have a bad experience with plated travelers. In this case, travelers do not burn up they are just cut out by the yarn.

Answer: I don't care what kind of traveler you have, it is no better than the setting of the traveler cleaner. If you don't have that set right I don't care what kind of traveler you are running, when the traveler loads up with lint, it will burn up.

Question: Talking about setting traveler cleaners, how are you going to keep lint from collecting on the inside of the traveler?

Answer: There has never been any frame that successfully controlled wind currents except on the Whitin Piedmont. On most spinning frames with high speeds, the travelers load from the back. This is due to air currents and lint being thrown in there. This keeps building up until an end comes down.

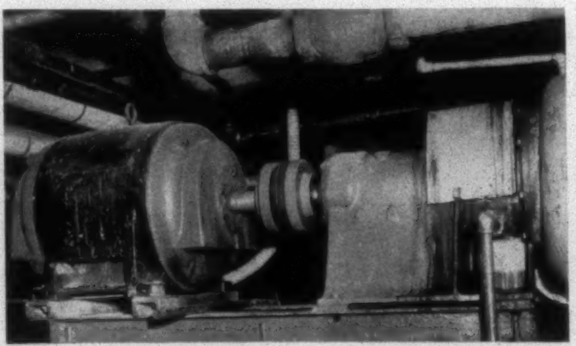
Question: Do any of you use block creeling? What other system of creeling do you use?

Answer: If you go to block creeling, you have got to have an accurate amount of roving on bobbins or you will make too much waste.

Answer: The reason you block creel is to get away from slubs. When you creel a bobbin of roving you make a slub three times as long as the piecing. In one mill making combed broadcloth they say they only have two spinners tending 35,000 spindles. Well, what they don't say is that they have ten others doing the creeling and cleaning up.

Answer: However, block creeling does give you better quality and fewer ends-down. The mill you are talking about is only making six or seven e.d.p.t.s.h.

Answer: These pre-determined yardage counters don't work too well. I have one on a frame that requires 2½ doffs to fill up a spinning frame. I can't get the roving bobbins to run out at the same time and sometimes there are as many as three layers of roving more on bobbins from one doff to another.



A WING NUT IN THE DYE VAT PUMP—Several months ago Virginia Mills in Swepsonville, N. C., had a wing nut work loose from a yarn carrier in the dye vat. The pump strainer had been knocked out of position when the carrier was lowered into the vat, and the loose wing nut ended up in the pump. Result—some $1,500 worth of damage. To prevent a reoccurance, the mill decided to try a No. 10 Sure-Flex coupling made by T. B. Wood's Sons Co. It wasn't long before another loose wing nut got into the pump, but according to Charles Beal, the mill's master mechanic, "It didn't hurt the pump a bit. The coupling just wound up. It wound so tightly that the flexible member jumped out of the flanges. This, of course, disconnected the pump from the motor. The pump was torn down and the nut removed." As a matter of fact, Beal points out, the coupling wasn't hurt either. It was put back in service with the same flexible member.

Answer: An attachment is coming out that will put the same number of strokes on the roving bobbins. This should work out much better than pre-determined yardage counters.

Answer: We used to have two roving haulers and a 9x5-inch package on roving. We now have the Saco-Lowell FS-2 12x7-inch package. We have a little less than five pounds on the package. We do not use roving haulers anymore. We have two hands creeling from spring bottom trucks into umbrella creels. The janitor brings roving up from the card room, pushes it in a storage area about 85 boxes per shift. The creelers take it from the storage area to the area they patrol and creel. We have over 160 hours running time on these roving bobbins. When we were creeling every 22 hours before, we were putting a gout in the yarn every time we creeled. Now we only have six people creeling on all three shifts. We only have six people to talk to about leaving too long a tail on the roving. The tail is what gives you the worst gouts. We make corduroy and these gouts do show up in the cloth. So we only have those six people and we are checking constantly and quizzing them about leaving short tails. On the Shaw SS-2 system we have, you must leave some tail or the end will come down between the middle and back roll. But we like this system. We have been using it for over a year. The creelers are real happy with their jobs. The spinners don't have to do any creeling—so they are happy. We do have a long haul from the storage area to the last place in the mill using roving. We try to get a given amount of stock back there. We use ladies as creeler hands. We are well pleased with the system.

Answer: I know of a mill that is using block creeling. They spin all combed yarn on warp bobbins. They rewind their filling. They have yardage counters on their roving frames which gives them a fairly accurate control on the amount of stock on the bobbin. They send doffs from each roving frame to the same spinning creels. The bobbins are marked so that this is possible. The block creeling was put in in connection with ends-down collectors and overhead cleaners. The whole spinning frame is creeled at one time. It doesn't make any difference where the frame is in the doff. The ends are broken back and are put up at one time. The spinners are running 62 sides. All they do is put up ends. Each overseer on each shift counts the number of frames that will creel on the next shift to make sure adequate help is on hand to do the work. They won't say how many hands they have cut out but their production is up. They were running the weave room 15 shifts; spinning 17 shifts; and spooling 18 shifts. Now they run the spinning 15 shifts and the spooling 15 shifts. Their reworkable waste has just about doubled.

Question: I can see where there would definitely be an advantage to running block creeling except for the waste increases. How are you going to get around the doffing cycle so that the frame is doffing at the time the creel is put in? And what if you are running rayons and acetates or combed and carded stock together?

Answer: Those are two big problems. How do you keep waste down and how do you run different types of fibers in the same room using block creeling?

Question: How long does it take this mill to creel a frame and get it started up?

Answer: 55 minutes.

Question: Have any of you seen the automatic doffing machine for spinning?

Answer: (supplier) This machine eliminates the doffer by actually duplicating a lot of the motions of a human doffer. It consists of two heads, one right hand and one left hand, that go down each side of the frame together. The automatic doffer moves approximately 25 feet per minute and will doff about four bobbins per second. The machine will doff a 400-spindle spinning frame in a little less than two minutes. The machine is on casters. It wheels up to the spinning frame and runs on two guide rails. The machine is entirely automatic. It comes back to the end of the frame when it has finished doffing. It is taken to the end of the frame by means of a conveyor attached to the spinning frame. The machine does not pull the frame down or kink the ends. It does move the travelers around to the back and grip the top 1/4-inch of the bobbin and pulls it off the spindle. The bobbin is then dropped into the doff box. There is a kicker which loosens the bottom of the bobbin from the spindle. There is also a small lever which taps the empty bobbin down on the spindle. The bobbins are stacked into a magazine with all the heads in one direction. The doff box is left on the end of the frame when the machine has completed a trip down the side. The head of the machine then goes back to the end of the frame it started from and is manually removed from the conveyor and replaced on the castered truck. The doffing machine is 30 to 50% more efficient than the human doffer. The machine has 30 to 50% less ends-down behind it than the human doffer.

Question: How many men does it take to operate the machine?

Answer: One man. This man has to piece up behind the machine. He also has to move the machine from one frame to another and to stack the bobbins in the hopper.

Question: How about the different styles or sizes of the spinning frames?

Answer: The number of spindles doesn't make any difference to the automatic doffing machine. However, gauge does make a difference. The machine will not doff a 3½-inch gauge frame if it is set up for 3-inch gauge. They can be adjusted to take a different gauge frame but it is a different setting altogether.

Question: How many bobbins will it lift per hour?

Answer: That will have to be figured out. We figure about four bobbins per second can be doffed with the machine.

Question: What is the cost of the machine?

Answer: The portable unit I have just described costs about $8,800 f.o.b. Japan. A stationary unit that doffs coarse count frames which doffs about every hour or so costs about $5,500. This unit is attached to the frame and is left there.

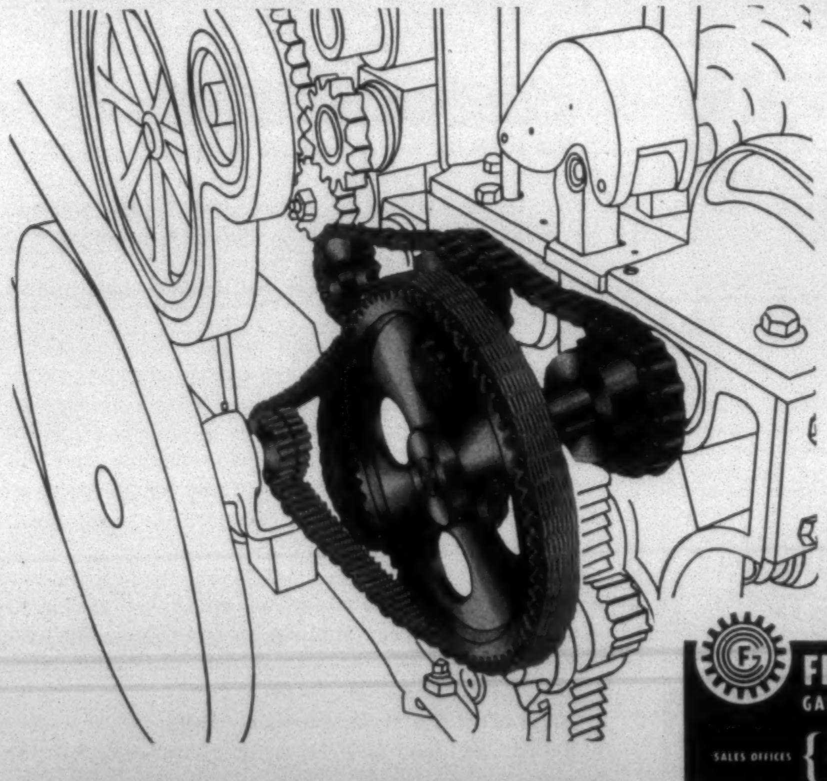
Question: When you doff one side do you have to switch the machine to doff down the other side?

Answer: No, each head has two units. One doffs down the right hand side and the other doffs down the left hand side. Both sides are doffed simultaneously.

Question: Does the machine account for different diameter bobbins?

Answer: The machine has to be adjusted for the particular gauge of the frame.

Question: What kind of maintenance technician would you have to have to operate that thing?



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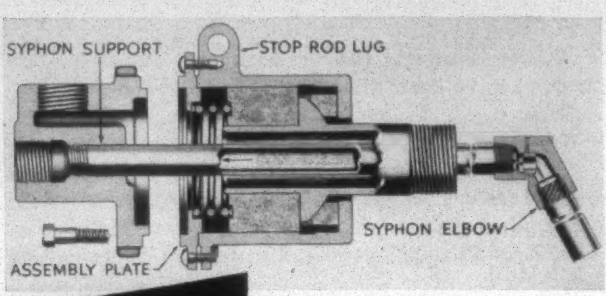

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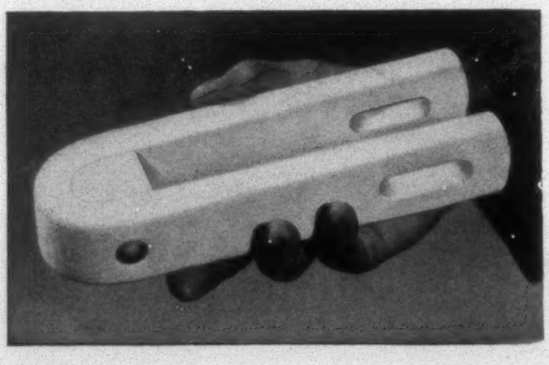

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Answer: Well, there is no doubt that the automatic doffer is a precision instrument but most mill electricians could do the maintenance work on it.

Question: Where could we go to see one of these automatic doffers work?

Answer: We don't have any in operation here in the States yet but we will have one at the textile machinery show in Atlantic City in May. We are going to try to put one on display here at State College or at the textile school in Belmont, N. C., where everyone can get to it and see it.

Question: What have you found to be the best frame cleaning methods?

Answer: Frame cleaning methods depend on the type of stock you are running, the type of ventilation system you have and the amount of humidity you run.

Answer: We take off top rolls and clean bobbin rolls with a rotary brush. We try to get around every seven or eight months.

Answer: We don't pick any rolls. We just tear the frame down and break the roving back in our umbrella creel and take an air hose and clean the frame. The frame is running when it is being cleaned and it is back in production within an hour. While the frame is down we change the travelers, oil the traverse rods, oil the rolls and do all the weekly maintenance. What it amounts to is the same thing as an overhaul job with the exception of plumbing the spindles and you don't take the steel rolls out. We don't take the top rolls out. This is on the SS-2 frame. It is necessary that we keep lumps of lint out from under our aprons or we will have cockled yarn. We blow the lint out with the frame running. We do this with the same amount of help we had before. We eliminated traveler changers and made them into roll cleaners. We clean 15 frames every 24 hours. Twice a week we do 17 frames in 24 hours. The frames stay so clean that you can actually raise the gear covers and see the number stamped on the gears or count the teeth. You don't see twist gear studs with lint stuck on them. We are real pleased with the system. We don't pick rolls at all.

Question: Do you have ball bearing rolls?

Answer: No, we have conventional top rolls.

Question: Do you cause a lot of gouts breaking back the roving like that?

Answer: No. We are just as gout conscious as anybody in the industry because we make corduroy. We do not cover the frame on either side.

Question: How often do you get around all the frames with this cleaning?

Answer: We get around once a week.

Question: How often do you change travelers?

Answer: We change travelers once a week at the time we clean up the frame. We use the nickel-plated traveler and probably could get a little more running time out of them but prefer to stay on the cycle we are on.

Question: How many people do you have in this cleaning crew?

Answer: We have four people including the fixer and two girls on each shift. We use a commercial-type alcohol to wipe the flutes on our Bahnson Collect-O-Vac. We also wipe the top rolls some with the alcohol. We do this cleaning on all three shifts, five frames per shift.

Question: When do you oil your spindles?

Answer: We have New Era spindles and don't have to oil them.

Engineered Lubrication In The Textile Industry

MODERN DESIGN AND THE DEMAND FOR INCREASED PRODUCTION HAVE BROUGHT ABOUT THE NEED FOR ENGINEERED LUBRICATION

By L. G. COMPTON*

INTRODUCTION

Petroleum became associated with the textile industry some 15 years prior to the Drake Well. In 1845 an early researcher found that the oily material from a salt well in Tarentum, Pa., could be mixed with sperm oil to form an acceptable lubricant for textile spindles. As the petroleum and textile industries grew, each became aware of the other's problems. Research men in petroleum began to make lubricants to fit the textile needs; and textile machinery manufacturers began to design their machines for lubrication. The textile industry is one of the largest in the U. S. today; and with the influx of modern design and demand for increased production, the textile industry is in need of engineered lubrication. The reason for engineered lubrication is that the spoilage of yarn or cloth, or the down-time of machines, can mean the difference between profit or loss. More and more plants are becoming aware of this and are setting up lubrication standards and systematic lubrication frequencies and checks.

OIL STAINS on yarn and fabrics have been one of the most annoying things in the textile industry since its beginning, and still is today due to the human element and some misunderstandings regarding causes and preventive measures. Any lubricant that has been used on functional parts of a machine contains some small particles of metal and metallic oxides which are very difficult to remove from the fabrics by the scouring process. Usually the lubricant is blamed for the discoloration when actually the cause is the fine metal particles. Minute particles of metals that get on the fabric as a result of staining during manufacture will penetrate into the fabric and become invisible after scouring. On aging, the iron is converted into ferric oxide which causes a brown stain to appear. Such stains will appear regardless of the composition or scouring properties of the oil used. Clean oil will sometimes stain if allowed to remain on the fabric long enough to oxidize.

Stain Causes

Some causes of stains are:

1. Method of Application—Regardless of the properties of the lubricant used, oil stains will appear if the lubricant is not carefully applied.
2. Dirty Machines—Accumulations of lint, dirt, rust and abraded metal on machines clog the oil holes, soak up the oil and, when fully saturated, fall on the fabrics and cause stains.
3. Unsuitable Lubricants—Sometimes unsuited lubricants require application in excessive amounts, or maybe so thin they are thrown off moving parts on to the fabrics.
4. Waiting too long before scouring—This lets oxidation have time to set up.
5. Over-oiling of hand-oiled or open type bearings.
6. Dripping from overhead motors and shaftings.
7. Creepage of oil along rolls and shafts—This can be controlled by using proper lubricant for application.

All of these cannot be stopped entirely, but they can be held to a minimum by proper supervision of lubricant application.

Contamination Of Lubricants

In a textile plant there is always a certain amount of lint, dirt, and abraded particles in the air. One of the major problems is that of keeping them out of the lubricants before applying the lubricant to the machine. There are several ways in which this can be done: (1) keep the lubricants covered and sealed at all times; (2) store the lubricants inside; and (3) never put used oil or grease into a container with unused lubricants.

Responsibility For Lubrication

The responsibility for proper lubrication in a textile plant belongs to management mainly because management has been entrusted with millions of dollars worth of machinery placed in the plant by stockholders who are looking for a nominal return on their dollars. It is management's responsibility to see that the machinery turns out enough production to do this. If the machinery is idle because of down-time due to worn out parts or improper lubrication, management must correct the situation.

Prior to World War II lubrication in a textile plant was a somewhat haphazard, hit-or-miss affair. Usually the person responsible was one who was no longer able to perform production duties, or one who could do nothing but use an oil cup. Sometimes if the oiler was needed to perform other tasks, his job of oiling went undone—for as much as a week at a time. Thousands of dollars a month was lost because bearings or shafts wore out or burned up. With the high cost of machinery and replacement parts today, management has taken steps to correct improper lubrication practices and they are striving to set up a supervised lubrication program.

Needs For Lubrication

The points listed are the major ones for management to check in setting up proper lubrication: (1) have a lubrication survey made of the plant; (2) have a written lubrication schedule; (3) assign responsibility for lubrication and make certain that the oilers are properly trained; (4)

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*The Pure Oil Co., Charlotte, N. C.

use as few lubricants as possible; (5) have a central oil and storage supply; (6) provide modern lubrication devices where necessary; (7) have follow-up system to insure proper lubrication; (8) make certain oil holes and lead-in pipes are cleaned on schedule to insure lubricant reaching the proper spot; and (9) insist on top quality lubricants from the supplier.

What can be expected from a proper lubrication program? Some of the things are: (1) increased profits and production; (2) protection of machinery and lengthening of machine life; (3) improved quality output of materials; (4) protection of materials from spoilage when in storage; (5) less consumption of lubricants and power; (6) reduction of down-time for maintenance and repairs; and (7) reduced capital expenditures for parts and supplies.

Lubricating Program

A good lubrication program depends on the selection and recommendation of suitable lubricants designed to do a specific job. Because of the specialized requirements of textile machinery, it is impossible to have a universal lubricant to meet each need. Textile spindles require a variety of viscosity oils to take care of various spindle speeds and sizes. Gears require special high viscosity lubricants with adhesive and extreme pressure properties. Looms require semi-fluid oils and greases that will not be thrown off when the loom is in motion. A variety of greases are needed for textile machinery but with the new multi-purpose grease the number is being cut to a minimum. Many kinds of processing oils are needed by the textile industry. There are a number of miscellaneous lubricating requirements in a textile plant, such as for cylinder oils, compressor oils, cutting oils, and transformer oils.

Basically, textile machines have the following types of points to be lubricated: plain bearings (both metal and others, such as plastic); and ball and roller bearings, sleeves, channel guides, slide cams, gears, chains, spindles, rings, travelers, gear boxes, etc. In one piece of equipment there may be a demand for a special lubricant while in another of the same design this would not be true. Differences in speed, load, temperatures, materials of the rubbing surfaces, reservoir size, and adequacy of seals can all account for different requirements on the same type machines.

Opening, Cleaning Machinery

Opening, cleaning and feeding machinery and conveyor systems are a fairly easy lubrication problem since they consist of either plain, ball or roller bearings, and a nominal amount of chain and gear drives. The speed of these machines, however, must be taken into consideration when selecting a lubricant.

Plain bearings that are oil-lubricated should be oiled with a good general purpose oil of a 300 to 500 S.U.S. viscosity.

Ball or roller bearings that are grease-lubricated should be greased with a good ball bearing grease of the No. 1 or No. 2 consistency, depending on the speed of the bearings. Here the application frequency will depend on the bearing load and running time and also the amount of lubricant applied. Most ball and roller bearings are lubricated at from 30 to 90-day intervals, but this is a factor to be worked out to meet specific plant requirements. In this instance, too much lubrication is worse than not enough.

Chain drives should be lubricated with a good viscous lubricant, or one with no-drip characteristic, in order that the lubricant not sling off. Driving gears should be lubricated in the same manner as the chain drives.

Picking Machinery

In most present-day textile plants most of the pickers are of the one-process type. These machines consist of beaters ranging in number from one to three, and a number of calendering rolls. Care must be exercised in the selection of a good oil or grease for the bearings on pickers because of the speed of the beaters and rolls. These machines should have a general purpose oil of 300 to 500 S.U.S. viscosity and a grease of No. 1 or No. 2 consistency. Chain and gear drives should be lubricated with a viscous or no-drip type oil.

Most textile plants at this point use a spray or processing oil. There has been some controversy over this but most plants find that it helps control lint and aids in the paralleling of fibers in later processes. It also protects the moisture in the fiber. The amount used varies in the various plants but the general rule is from 1/4% to 1% depending on the staple of fiber. This processing oil should be a light colored pale oil with low carbon content and one that is easily bleached or washed from the fabric.

Carding Machinery

Good carding depends largely on good lubrication be-

INDUSTRY, GOVERNMENT, WASH-WEAR—Industry and U. S. Department of Agriculture scientists are shown examining experimental wash-wear garments during a recent research planning session at the U.S.D.A.'s Southern Utilization Research and Development Division at New Orleans, La. To sharpen up research, the U.S.D.A. appoints industry scientists to work as collaborators with U.S.D.A. scientists in an effort to maintain the most practical, feasible and productive cotton utilization research program possible. These collaborators meet annually at the Southern Division to review current research programs and make recommendations for the future. From left to right are W. A. Reeves, acting chief, Cotton Chemical Laboratory, Southern Division; W. J. Martin, Federal Extension Service, Clemson, S. C.; Dr. J. D. Reid, head of the Southern Division's wash-wear task force; Dr. C. H. Fisher, director of the Southern Division; Dr. P. B. Stam, director of research, J. P. Stevens & Co., Greensboro, N. C.; and Dr. L. Smith, director of utilization research, National Cotton Council, Washington, D. C.

cause of the close settings that have to be maintained on the cards. This department should have a thoroughly experienced oiler who knows the exact location of all parts to be lubricated and one who will see they are lubricated with the proper lubricant at the right time.

Plain bearings and all open oil holes should be oiled with a good general purpose oil of 300 to 500 S.U.S. viscosity at 100° F. The box on top of the bearings of the main, doffer and licker-in cylinders should be kept packed with a good stiff grease of a No. 3 or No. 4 consistency and should be oiled every eight hours with the general purpose oil. These grease boxes should be cleaned periodically and repacked with clean grease.

Much discussion has arisen over the lubrication of the comb boxes, and the attaining of proper lubrication of card comb boxes is sometimes a difficult problem. The bath lubricated eccentric operates at high speed—approximately 1,400 to 1,600 r.p.m.—which results in considerable churning of the lubricants and tends to cause foaming and promote leakage. Sometimes a semi-fluid grease is used to deter leakage but this is not desirable because of the possibility of separation of oil and soap causing blocked oil passages and build-up of deposits on internal surfaces which, in turn, retards heat transfer. However, this type lubricant can be used if proper scheduling of cleaning and draining can be maintained. When comb boxes are in good mechanical condition a straight mineral oil of 300 to 600 S.U.S. viscosity at 100° F. will give the most satisfactory lubrication. Cards with worn comb boxes should be lubricated with an oil of 750 to 1,200 S.U.S. viscosity at 100° F.

It is important that a minimum level be maintained in the comb boxes at all times to assure proper lubrication of all moving parts. Too high a level results in excessive churning and splashing which increases temperatures and promotes leakage.

The selection of proper lubricant and proper oiling schedule must be worked out for the individual plant because the variations in operating and mechanical conditions in the different plants do not permit specific recommendations that will be applicable in all cases. Many plants are conquering these problems by replacing the comb boxes with sealed ball and roller bearings.

The gears and chain drives on cards should be lubricated with a no-drip oil to prevent fiber spoilage. Cards equipped with reduction gear drives should use a mild EP lubricant in this operation to insure proper lubrication.

Drawing To Roving Frames

Drawing frames are relatively simple to lubricate. For general oiling an oil of 400 to 500 S.U.S. viscosity at 100° F. is necessary. While a good semi-fluid or no-drip oil is required on the rolls to prevent creepage on to the yarn. On some drawing frames the rolls are needle bearings which require a soft petrolatum for lubrication.

Lap winders require a good general purpose oil of 400 to 500 seconds at 100° F. for all lubrication except the lifting rolls which are usually roller bearings requiring a grease of No. 2 consistency.

Combers require the same general purpose oil except on the rolls where a semi-fluid oil must be used. Most of today's combers have a central oiling system which has to be manually operated at different intervals depending upon

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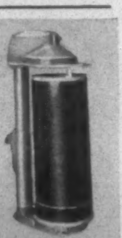

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the operating hours of these machines. Also, most of the newer combers are equipped with shell type rolls which require a soft petrolatum.

Roving machines require quite a bit of lubricating attention. They have close tolerances and their performance depends upon proper lubrication. The plain bearings should have an oil of 300 to 400 seconds viscosity at 100° F. and should be lubricated every eight hours of operation. The chains and horsehead drive should be lubricated the same as the plain bearings. The gears on the roving frames should be greased with a No. 2 consistency grease. Bobbin gears and spindles should be lubricated with an oil of 300 to 400 seconds at 100° F. and the spindle steps should be lubricated once a week. The top rolls should be lubricated with a semi-fluid oil or grease once a week. Roll stands should be packed once every six months with a No. 4 consistency grease. The bobbin gears should be packed the same as the roll stands.

Spinning Frames

The spinning department uses a considerable proportion of the total power used by the plant, therefore, proper lubrication of spindles—particularly the oil bath, high speed spindles—is important. Power consumed by just one spindle is very small but when we consider thousands of spindles in each plant, the power cost is considerable. The careful selection of correct grade of oil can mean a difference in cost.

The oil in the bath-type spindle forms a complete film between the bolster and spindle and keeps friction to a minimum. This oil also acts as a cushion and helps prevent vibration. The selection of the right spindle oil depends upon several factors such as type and size of spindle, speed of spindle and operating conditions. The conditions vary greatly from plant to plant, and each plant should have a study made of its particular lubricant needs. Other characteristics required in a spindle oil are resistance to oxidation, non-corrosive and low vaporizing tendencies. Preventive maintenance is important here in spinning. Spindles and bolsters should be cleaned at regular intervals and replenished with new oil.

Ball and roller bearing spindles are fast coming into the textile picture. The factors affecting the selection of the correct lubricant are the same as for plain spindles.

Aside from spindle lubrication, most spinning frames are equipped with a central oiling system. An oil of 300 to 500 seconds viscosity at 100° F. should be used for best results. On frames equipped with ball cylinder bearings, a good grease of No. 2 consistency should be used. The lubrication of the saddles and top rolls should be done with a semi-fluid oil and a one-drop type oil can should be used. Care should be taken here not to over-lubricate, as any oil creepage on the rolls will cause the yarn to be spoiled. Top roll stands should be repacked with a No. 4 consistency grease every six months.

Twister Frames

As a rule twister frames require a more viscous oil for their spindles because of the heavy duty work involved but the requirements for a high quality oil to minimize power losses resulting from oxidation and the formation of deposits are no less important. The general lubrication for twister frames is practically the same as for spinning frames. In the selection of oil for spindles on twister frames, the size and speed of spindles should be given careful study. The lubrication of twister rings should be given careful study as to type and size of ring as these factors determine the lubricant to be used.

Spooling and warping machines require a very small amount of lubricant. A general purpose oil of 300 to 500 seconds viscosity at 100° F. must be used and a No. 2 consistency grease is required for the ball and roller bearings. For gear boxes an SAE 90 gear oil should be used.

Slashers are generally equipped with ball and roller bearings and most of these bearings operate in extended or higher temperatures. They should be lubricated with a No. 2 consistency grease with a high melting point. A lithium or silica-gel type grease serves best on these machines. Reduction gears and drive units on slashers require an SAE 90 gear oil.

Tie-in machines require an oil of from 80 to 100 seconds at 100° F. for general lubrication.

Oil-lubricated looms probably represent the most common source of oil stains in a textile plant because of the sharp jerky motion of some parts tend to throw off excess lubricant. Lint tends to block oil holes unless special effort is made to keep the holes clean. When oil holes are blocked, the lubricant does not reach the frictional parts, thus causing wear and increasing the possibility of staining the cloth.

The moving parts of the looms operate at a relatively moderate speed and are subjected to heavy duty. Hence a good viscous oil should be used for best results. For methods of automatic oiling, an oil having an S.U.S. viscosity of about 500 seconds will give good results. However, an oil of greater viscosity, say 750 to 1,000 seconds, should be used on looms that are hand-oiled. Most plants today use semi-fluid greases on hand-oiled looms because of its resistance to being thrown off moving parts. For general loom lubrication, a semi-fluid grease of about 750 seconds will be satisfactory but a more viscous grade should be used on overhead motions.

Most modern looms are almost entirely equipped with grease fittings and anti-friction bearings are generously used. The bearings do not represent a lubrication problem and can be lubricated very satisfactorily with a good No. 1 or No. 2 consistency grease, preferably with a cylinder stock base because of its better load carrying capabilities.

Gears and cams are generally grease lubricated. A good viscous grease of No. 2 consistency should be used. The most preferred type would be a grease with extreme pressure properties. More wear occurs on gears and cams than any other place on the loom so great care must be taken to see that all gears and cams are properly lubricated.

It is hard to set up specific schedules for looms because a number of factors enter into the lubrication picture. Some of these factors to be considered are types of looms, speeds of looms, weight or weave being made on loom, temperature where loom operates, and humidity where the loom operates.

How can lubricant manufacturers assist textile plants in a lubrication program? Some things are: (1) furnish a competent lubrication engineer to study each plant, make surveys and recommendations; (2) assist plant in setting up proper storage and handling of lubricants; (3) continue research and quality improvements of textile lubricants; and (4) work closely with textile machinery manufacturers to determine types of lubricants required to best supply the textile industry.

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Pneumatic Clutch Improves Picker Operation

OLDER MACHINES WHICH ARE BELT DRIVEN FROM LINE SHAFTS CAN NOW BE PROVIDED WITH A MORE EFFICIENT MEANS OF INTERMITTENT DRIVE

By W. A. LATOUR*

MODERN equipment favors the use of individual motor drives, but many of the older machines in the textile industry are belt driven from line shafts with manual or mechanical belt shifting devices. It is frequently advantageous to provide a more efficient means of intermittent drive, without going to the costly expedient of replacing the entire drive.

Inefficient belt shifting units are most frequently found in the opening room. A problem of this nature was encountered with a one-process, two-beater cotton picker equipped with a blending reserve which was used to process experimental laps required for research at the Southern Regional Research Laboratory. It became apparent that the conventional belt shifting mechanism controlling the feed system was a factor contributing to lap unevenness.

The fault lay in the fact that after the blending reserve signaled for the cotton feed to be stopped, cotton continued to be fed to the reserve box during the relatively long period of belt shift. The reverse was true at the other end of the cycle; after the reserve box demanded cotton, no cotton was fed until the belt shift from the idle pulley to the drive pulley was practically complete. The result was an excessive fluctuation of the fiber level in the blending reserve which caused varying densities in the cotton delivered to the finished picker beater.

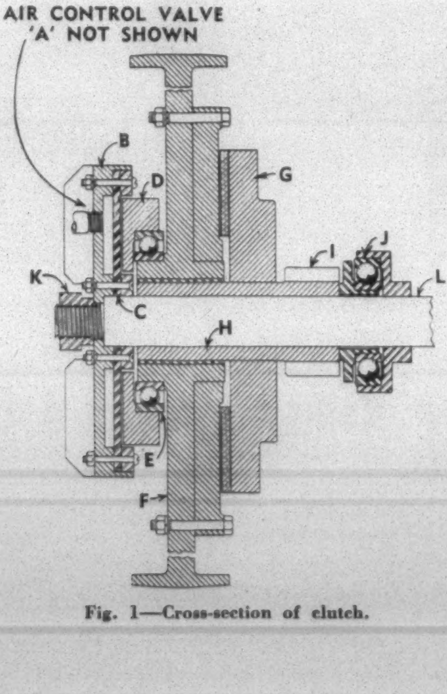

Fig. 1—Cross-section of clutch.

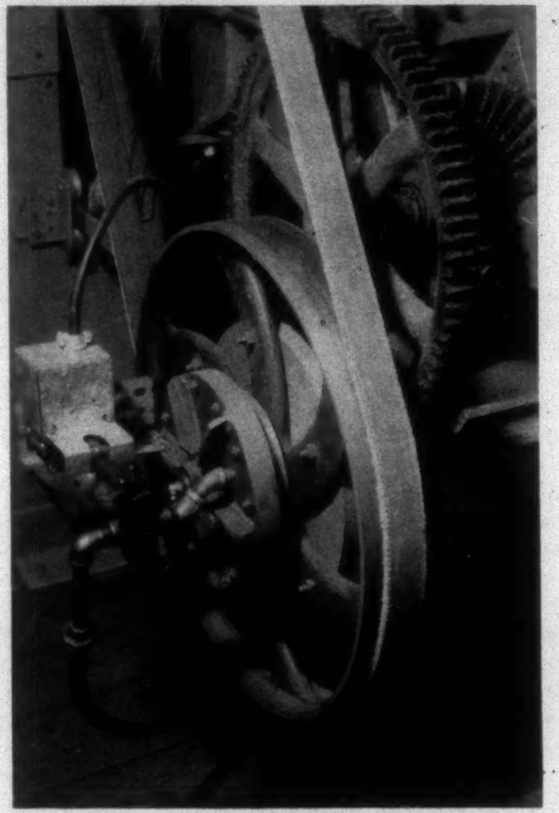

Fig. 2—Clutch installed on a picker.

Several solutions to the problem were considered and discarded because of excessive cost, too much alteration, and lack of space for installation. With these limitations in mind, a simple, pneumatically powered, electrically controlled friction clutch was designed. It was constructed from existing belt shifting components, scrap metal, bearings and other easily acquired material. A machine shop equipped with a drill press and metal turning lathe of sufficient capacity will encounter no difficulty in fabrication of the clutch. Precision fits are necessary only for nesting the angular ball thrust bearings and the core and pilot bearings of a two-way air control valve. The clutch is designed so that lubrication and maintenance are held to a minimum, assembly and installation of components to a single nut. Substitution of the clutch for almost any belt shift assembly, without excessive modification, is possible.

As can be seen from Fig. 1, when air of sufficient pressure is admitted by an air control valve (A) into cylinder (B), the air tight diaphragm (C) distends, forcing thrust plate (D) and bearing (E) outward. The inner race of bearing (E) is a press fit on the hub of continuously driven pulley and clutch plate (F), this assembly is free to rotate around and slide longitudinally on sleeve (H). Pressure plate (G) and gear (I) are attached immovably to one end of sleeve (H). The squeezing action is contained by nut (K) and thrust bearing (J), the mounting shaft (L) is fixed to the side of the picker by two half-inch set screws.

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*Southern Regional Research Laboratory, one of the laboratories of the Southern Utilization Research and Development Division, Agricultural Research Service, U. S. Department of Agriculture.

The two-way air control valve is machined from a rectangular block of steel and is operated by a 110-volt solenoid with return spring. One of the reinforcing fins on the closed end of the cylinder forms a convenient mount for this assembly. The solenoid is energized by the action of a mercury switch linked to a sensitive swinging gate hung at a predetermined height inside the reserve hopper. A commercially available control valve can be purchased, but may require modification for this particular application. If desired, slower engagement or disengagement may be obtained by the use of a metered orifice placed in either the inlet or discharge port of the valve. Fig. 2 is a photograph of the air valve and the clutch installed on a 1914 model picker.

Installation of the air-actuated clutch eliminated the lag in the feed system and resulted in the column of cotton in the reserve hopper being kept at practically a constant level, as compared with a fluctuation depth of about 12 inches with the conventional belt shifting mechanism. No maintenance or operating difficulties have been experienced over a period of 12 months. It is believed that the clutch may have application to other equipment requiring a quick acting, on-off type of drive.

Engineering drawings and technical information on the pneumatic clutch are available without charge from the Southern Regional Research Laboratory, P. O. Box 19687, New Orleans 19, La.

The Outlook Is Bright

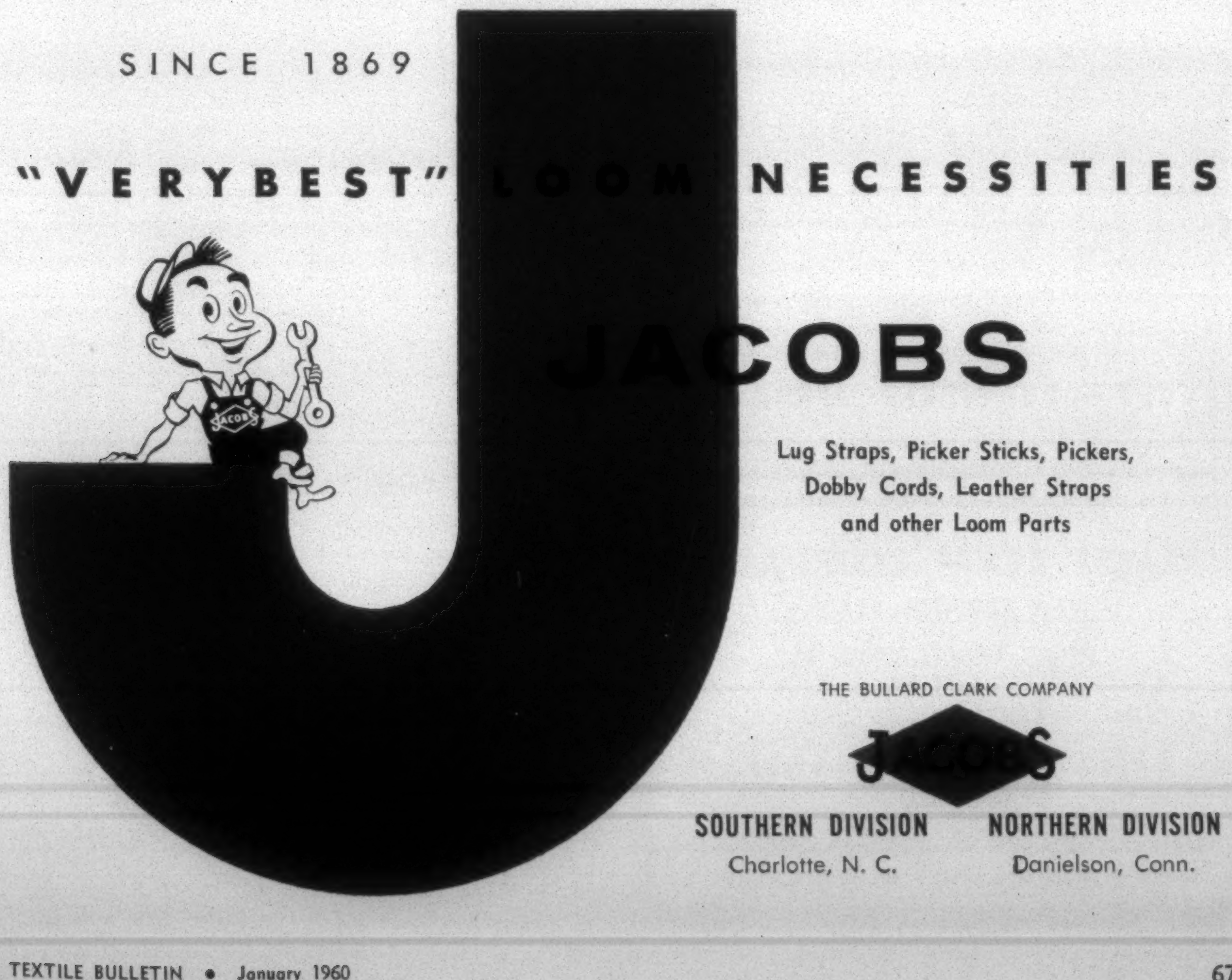
(Continued From Page 35)

$1.25 an hour and to bring under coverage many businesses not covered under the present law.

This legislation has been the subject of hearings in the Senate Committee on Labor and Public Welfare. It is expected to be pushed strongly by Senator John Kennedy (D.-Mass.), another Democratic Presidential candidate, and by such Senators as Wayne Morse (D.-Ore.), Hubert Humphrey (D.-Minn.), and Paul Douglas (D.-Ill.).

Organized labor, which suffered "defeat after defeat" in the first session, will, according to some observers, be exerting its strongest pressure for the extension of the minimum wage and a boost in the minimum rate. Business interests will be fighting the legislation every inch of the way. The thinking is that while the great number of industries would not be affected, *legally,* since they already pay more than the expected minimum wage, all of them would be affected economically in the long run. This is because such a floor causes laborers in higher brackets to seek increases to maintain the wage differentials.

All in all, 1960 is going to be an extension of 1959, which, in spite of economic growth, still posed great problems of management. The New Year, like the old, will see actions by Congress that will please many and displease many others. On balance, the year ahead may be more challenging, and pose more management problems, than 1959. Since all progress comes by friction, and in turn creates some friction, this may be in the nature of things.



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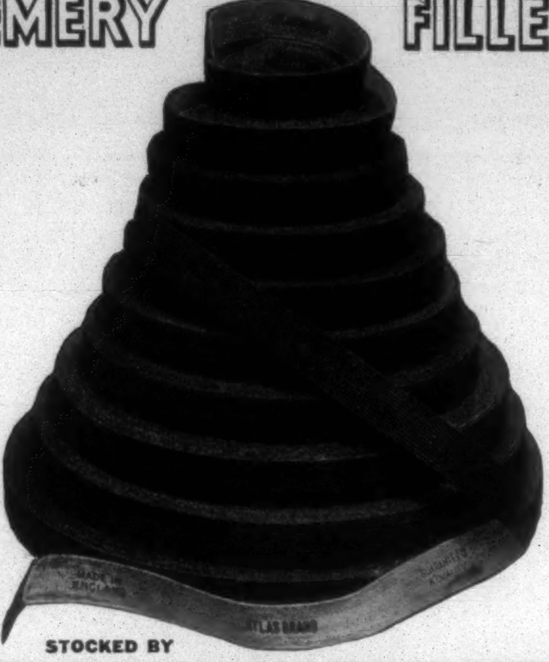

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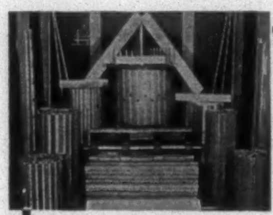

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Textile Optimism Voiced By Chapman

Chapman

Textile industry optimism hinging on possible government action on imports and other problems was voiced recently by James A. Chapman, president of Inman (S. C.) Mills, and president of the American Cotton Manufacturers Institute. Chapman said, "The year 1959 for textiles has been marked by improvement along several lines and the emergence of a growing awareness by our government of some of the many problems peculiar to the textile industry. Leadership of the industry as a whole is much more optimistic than a year ago, but whether this optimism is justified will depend on whether our government changes its policies regarding the textile industry, particularly as to imports and the two-price cotton system.

"Recently, President Eisenhower, acting on recommendation of Secretary of Agriculture Benson, directed the Tariff Commission to make an investigation of the imports of cotton textiles. We expect this investigation to show that relief from imports is necessary for the continued health of our textile industry

"In the past year, we have seen mill inventories decrease steadily, while unfilled orders increased; the price structure of the industry improved; production levels rose somewhat; over-all employment in the textile industry increased and the profit position has improved, although textile profits this year were still only slightly over half the average of all manufacturing. We must remember that 1958 was a very bad year and we had nowhere to go but up, and the American textile industry still is below the levels of 1952 and 1953 in cotton consumption, while manufacturing margins and employment are far below the 1949-1954 levels."

Carolina Yarn Association Names Officers

Officers elected for the 1960-61 season by the Carolina Yarn Association include: J. B. Anthony, B. F. Goodrich Co., Greensboro, N. C., president; J. Etheridge, Courtauld's Ltd., Greensboro, vice-president; Ben Jordan, Sellers Mfg. Co., Saxapahaw, N. C., secretary; Wilbur Evans, Dixie Mercerizing Co., Mebane, N. C., treasurer; and Frank P. Barrie, Leesona Corp., executive secretary. The 1960 annual outing of the association will be held at Pinehurst, N. C., May 11-14.

Inventory Surveys To Start In January

An industry-wide survey of inventories is to be started in January by the Bureau of the Census. The government sponsored survey is being done to help smooth out the industry's strong recessions and booms. The survey will attempt to find the inventory position of the entire industry including weaving, finishing, converting, cutting and wholesaling when in complete operation.

With the Census Bureau data, each segment of the industry should be able to make more rapid changes in inventories to adjust to changed business conditions, according to the U. S. Department of Agriculture. If any segment of the industry fails to assess the condition of business activity properly and is slow in adjusting its inventories to changes in sales conditions, the adjustment is magnified when it does come. The cumulative effects of these lags in adjustment may cause the greige goods manufacturer to suffer a very large change in business conditions even though the change in retail business activity is small.

The U.S.D.A. said the data found in the survey might provide the basis for business adjustments which would mitigate the strong recessions and booms in the textile industry. The impetus to start collecting the inventory information was provided by the report of the Pastore Senate Textile Subcommittee.

N.C.T.E. Holds Annual Meeting

Educators from the major U. S. textile schools were the guests of the Industry Committee in Bakersfield, Calif., at the annual meeting of the National Council for Textile Education. The textile educators visited ranches in the San Joaquin Valley of California that averaged four bales of cotton to the acre in 1958; saw commercial cotton that normally ranges between 90,000 and 100,000 pounds per square inch tensile strength, and in some cases even stronger; and a cotton co-operative that is combining cotton classing, laboratory testing, punched-card tabulating machines, and huge mechanical bale handling equipment to render quick and accurate service to its customers.

Members of the N.C.T.E. participating in the meetings and tours included Dr. John H. Dillon, president, Textile Research Institute, and president of the N.C.T.E.; Dr. Martin J. Lydon, president, Lowell Tech; Dr. Malcolm E. Campbell, dean, and Dr. Edward A. Murray, director of instruction, School of Textiles, North Carolina State College, Raleigh; Dean Gaston Gage, School of Textiles, Clemson College; Dr. James Taylor, director, A. French Textile School, Georgia Tech; Prof. Charles Knight, School of Textiles, Auburn University; and Prof. Ray Flege, director, textile engineering department, Texas Tech. Hosts to the educators were California Planting Cotton Seed Distributors, Producers Cotton Oil Co., Calcot Ltd., and the National Cotton Council.

At the executive meetings of the N.C.T.E. the deans discussed ways and means of increasing enrollment to meet the ever-growing demand for textile graduates; improvements in the curricula and courses offered by the various textile colleges; textbook requirements; textile research programs; and numerous other problems and responsibilities of textile education in the U. S.

N.C.T.M.A. Names Committee Chairmen

Chairmen for 14 standing committees of the North Carolina Textile Manufacturers Association have been announced by its president, J. C. Cowan Jr., of Greensboro, vice-chairman of the board of Burlington Industries. The committees and chairmen include:Resolutions—Elliott J. Neal, Rex Mill, Gastonia; Traffic—Julian Robertson, N. C. Finishing Co., Salisbury; Cotton—C. A. Cannon, Cannon Mills Co., Kannapolis; Finance—D. R. LaFar Jr., LaFar Mills, Gastonia; Audit—J. C. Roberts, Textiles-Incorporated, Gastonia; Safety—C. Marshall Davis, Golden Belt Mfg. Co., Durham; Legislative—Hal W. Little, Little Cotton Mfg. Co., Wadesboro; Tax— L. E. Chittum, American & Efird Mills, Mount Holly; Public Relations—Halbert M. Jones, Waverly Mills, Laurinburg; Research—Walser A. Black-

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Announcement

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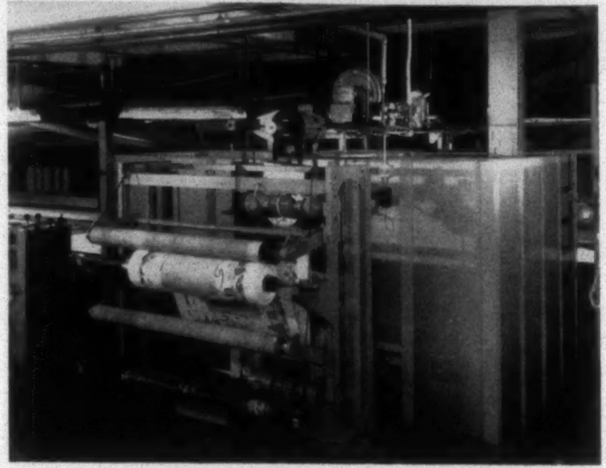
wood, Washington Mills Co., Winston-Salem; Employment Security—C. A. Cannon, Cannon Mills Co., Kannapolis; Textile School—Jesse A. White, J. P. Stevens & Co., Greensboro; Nominating—W. C. Cannon, Cannon Mills Co., Kannapolis; and Program—J. C. Cowan Jr., Burlington Industries, Greensboro. S. S. Holt of Cannon Mills is the association's representative for the N. C. Cotton Promotion Association, and H. M. Weymouth, American & Efird Mills, is representative for the Cotton Buyers and Classers group.

Castle Creek Print Works Installs Adams/Zeller Drying And Curing Unit



Delivery end of Adams/Zeller gas-fired screen printer dryer-curer.

A new gas-fired drying and curing machine for screen-printed fabrics, developed by Adams/Zeller Corp., Glenside, Pa., is now operating in a continuous automatic screen-printing range at Castle Creek Print Works, Washington, N. J. Since 1954, Castle Creek has installed four automatic screen-printing ranges. The latest, which went into operation in May, uses the Adams/Zeller gas-fired curing unit. It is more flexible than steam curing, and provides more accurate control of temperature, according to Frank J. Percarpio, president of Castle Creek.

A patented pneumatic advance is a feature of the Adams/Zeller machine. As the printing machine stops and starts, advancing the cloth at a rate of 44 inches per second, the Adams/Zeller machine assures proper drying and curing with an intricate, automatic valving system, dual pressure controller and an electronic timer.

In the drying zone, with a holding capacity of ten yards, controlled high velocity air impinges on the fabric. Lower velocity, evenly distributed air passes over the cloth in the curing zone, which has a holding capacity of 44 yards.

The gas-burning heating system develops up to one million BTU, providing for temperatures up to 500° F. All rolls are Teflon-coated to minimize heat transfer to the fabric in the stop position during the printing cycle.

The centrifugal-type fans are designed and fabricated for high static pressure operation. They are driven by 10 h.p. motors through variable speed pulleys, thus providing a wide velocity range for drying and curing light or heavy fabrics.

Production on the new automatic screen-printing range at Castle Creek is 1,000 yards per hour, with cloth widths up to 80 inches. Castle Creek production is principally drapery fabrics and tablecloths.

Man-Made Fiber Producers Hold Election

The Man-Made Fiber Producers Association has elected Edward A. O'Neal Jr., president of the Chemstrand Corp., Decatur, Ala., chairman. O'Neal succeeds Andrew E. Buchanan Jr., The Du Pont Co., who served two terms as chairman of the group. O'Neal was elevated from the post of vice-chairman.

Charles L. Paine, president of Courtaulds (Alabama) Inc. was selected to fill the vacancy created by the advancement of O'Neal. Matthew H. O'Brien was re-elected president and treasurer. Miss Miriam Williams was named secretary. Raymond C. Baker, formerly assistant to the president, was advanced to vice-president in charge of public relations.

Wool System Activity Shows Increase

The weekly average rate of fiber consumption on the woolen and worsted systems in October was 2% above the September rate, and 11% above that of October 1958. The weekly average raw wool consumption during October was 8,247 thousand pounds (scoured basis) or approximately at the same rate as in September and 16% above that of October 1958. Consumption of apparel class wool was 1% above the September rate and 22% above that of October of last year. The rate of consumption of carpet wool declined 1% from the consumption during the preceding month, but was 8% above the October 1958 rate. Consumption of fibers other than raw wool averaged 6,572 thousand pounds per week, or 4% above the September average, and 5% above October 1958.

Charlotte Textile Club Holds Election

In its annual election of officers, December 14, the Greater Charlotte Textile Club named Herbert Woodward, vice-president of Southeastern Factors, president. Woodward was elevated to the presidency from the post of vice-president which he has held for the past year. He succeeds J. D. Barbee, Cramerton Division of Burlington Industries.

The club also selected John L. Stickley, John L. Stickley Yarns, first vice-president; James I. Teat, Southeastern Engineering, second vice-president; and George E. Zeigler Jr., The Kendall Co., secretary and treasurer.

Cotton Consumption Down In October

Cotton consumption in the U. S. in October 1959 totalled 732,245 running bales as compared with 862,830 running bales in September and 839,122 bales in October 1958, according to figures given by the Bureau of Census. The daily average consumption was 36,612 in October against 34,513 in September and 33,565 in October of 1958. Stocks at the end of October totalled 13,444,720 bales. This compares with 10,503,248 in September and 11,665,203 in October of the previous year.

Some 8,566 bales of foreign cotton were consumed in October as compared with 9,400 in September and 7,993 in October 1958. Consumption of man-made fiber staple totalled 39,197,000 pounds in October against 46,811,000 pounds in September and 50,274,000 pounds in the previous October.

At the end of the month there were 20,269,000 cotton-system spindles in place with 19,273,000 active—this compares with 20,285,000 in place and 19,292,000 active in

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MANUFACTURING CHEMISTS FOR THE TEXTILE INDUSTRY

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Cast iron loom beam heads with cut tooth or sand tooth gears, and adjustable steel beams. Any size and type.

Repairs and Repair Parts on any make and size warper section beams.

Reasonable prices.

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September and 20,710,000 in place and 19,324,000 active in October 1958.

The spindles were operated 9,970,000,000 hours in October against 11,930,000,000 in September and 11,517,000,000 hours in the previous October.

Cotton Consumption, Production Up In '59

The use of cotton on a world-wide basis and the production of cotton in the U. S. are both expected to be greater this year than in previous years. World cotton consumption this season may equal or even exceed the record 21 million bales of the 1956-57 season according to the International Cotton Advisory Committee. Last season's cotton consumption amounted to some 20.3 million bales.

The I.C.A.C. also said cotton production would probably set a new record high, by about three million bales, this season. The increase is mainly in the U. S. Production in countries other than the U. S. is expected to decline to 17 million from 17.4 million bales last season. The committee said U. S. exports of cotton would probably be about 5.5 million bales.

The U. S. Department of Agriculture has revised its estimate of the 1959 U. S. cotton crop down 100,000 bales to 14,701,000 bales. This estimate is substantially greater than the 1958 crop which amounted to 11,512,000 bales. The 1948-57 average crop of 14,046,000 bales is also exceeded by estimates of the current season. As of December 1, 1959, a total of 13,402,874 running bales of the 1959 crop had been ginned compared with 10.2 million and 8.0 million bales, respectively, on the same dates in 1958 and 1957.

Record yields per acre were forecast by the U.S.D.A. for the current crop in Tennessee, Missouri, Arkansas and California. The U. S. average yield now is estimated at 465 pounds. In 1958 the average was a record 466 pounds per acre.

Tire Cord Production Increases

Production of tire cord and tire fabric during the third quarter 1959 was 119,748 thousand pounds. This was 2% above the previous quarter, and 26% above the third quarter 1958 level. The output of rayon tire cord and tire cord fabric increased less than 1% from the previous quarter's level to 76,671 thousand pounds. During the same period the production of nylon tire cord and tire cord fabric increased 8% to 30,625 thousand pounds, while the production of cotton tire cord and tire cord fabric (excluding chafer fabrics) decreased to 920 thousand pounds. Stocks of tire cord and tire cord fabric on October 3, 1959 were 49,192 thousand pounds, or 3% above the July 4, 1959 level and 27% more than the stocks on September 27, 1958.

N. C. Textile School Starts New Classes

New classes were started at the North Carolina Vocational Textile School, Belmont, N. C., January 4, in all courses, namely: yarn manufacturing, weaving and designing, knitting, mill maintenance (machine shop) and tailoring. Classes run from 8:20 A.M. to 1:00 P.M. and 2:00 P.M. to 6:30 P.M., Monday through Friday. For non-veterans who are pretty well experienced, classes may be arranged for shorter hours within the above listed schedule. There is also a class in the mill maintenance course that runs from 5:00 P.M. to 9:30 P.M., five nights per week. Anyone interested should contact the school office which is open Monday through Friday, 8:00 A.M. until 5:30 P.M.

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Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

Bowler

Joseph Bowler Jr. has joined the sales department of Leesona Corp. (formerly Universal Winding Co.) and has been assigned to its Southern district, with headquarters in the company's Charlotte offices. Before joining Leesona, Bowler, who has more than a decade of experience in the textile machinery field, was a sales manager for Terrell Machine Co. Prior to that he was exclusive agent for the Allen Beam Co.

Walter L. Patton has been appointed an assistant vice-president at Alice Mfg. Co., Easley, S. C. Patton has been with the company since 1956 in various administrative capacities. He is a 1949 graduate of Georgia Tech.

Hugh William Close, president of Springs Cotton Mills, Lancaster, S. C., has been elected to the board of directors of the South Carolina Cotton Manufacturers Association to fill out the unexpired term of his late father-in-law, Col. Elliott White Springs.

Leslie

Frank H. Leslie is joining the executive staff of Burlington Industries, Greensboro, N. C., as vice-president and merchandising co-ordinator. In his new position, with headquarters in New York City, Leslie will co-ordinate and help formulate merchandising policy for Burlington Industries and its divisions, in addition to maintaining appropriate contacts with major customers and out-of-town personnel. He has been president of Leslie, Catlin & Co., one of the nation's largest cotton greige goods selling organizations.

Harry Vogel has been named manager of the new Charleston, S. C., plant of Stein Hall Co. Vogel was formerly assistant plant manager of another Stein Hall subsidiary, the Stein-Davies Co., Long Island City, N. Y.

Several promotions have been announced by Woodside Mills, Greenville, S. C. David E. Cromwell has been named vice-president. He will be responsible for merchandising for all Woodside mills. . . . Harold Mason has been named a vice-president for all manufacturing. He had been general manager of the fancy goods division until the present promotion. . . . Connor Tewards has been named assistant treasurer. He has been with the company since 1949. . . . Cliff Plowden was also named assistant treasurer. Plowden, who joined the firm in 1956, was previously with Springs Mills.

John F. Boyle has been named administrative assistant of the textile machinery division of Saco-Lowell Shops, Easley, S. C. . . . Leonard W. Turner, former administrative assistant, has been promoted to assistant works manager.

Browder

Basil D. Browder, executive vice-president of Dan River Mills Inc., Danville, Va., was re-elected president of the Virginia Manufacturers Association at the annual meeting held recently at The Homestead, Hot Springs, Va. This will be Browder's second consecutive term as principal spokesman for Virginia industry.

E. H. Hawkins Jr. and Simon Hobbs Jr. have been named service representatives in the fiber sales service department of Eastman Chemical Products Inc., with headquarters in Kingsport, Tenn. Both men have been textile engineers in the laboratory of the fibers development division. . . . James R. Reich has been appointed sales development representative. Reich was formerly a chemical engineer on the filter products development staff.

Kenneth Matheson, industrial engineer at Mooresville (N. C.) Mills of Burlington Industries, has accepted the position of general manager of Sunbury (Pa.) Textile Mills. Sunbury produces upholstery and fine dress fabrics. Matheson had been with Mooresville about ten years. He will be succeeded by Dennis Johnson.

James W. Culclashure has been named personnel manager for Halifax (Va.) Worsted Mills. He succeeds William Slate who retired recently after 14 years at the post. Halifax is a member of the Pacific Mills group of Burlington Industries.

R. Carl Dick Jr. has been chosen to head the recently combined greige goods and industrial fabrics divisions of Indian Head Mills, New York City. Dick will have the responsibility for all sales, merchandising and manufacturing activities of the mills in Cordova, Ala.; Glendale, S. C.; and Ponce, Puerto Rico. He will make his headquarters in Glendale.

George H. Smith has been appointed plant manager of the Whitney, S. C., plant of Indian Head Mills. He succeeds R. C. Dick Jr., who was recently promoted to the position of division manager of the newly created greige and industrial fabrics division of the company. Smith has been with the Pequot operation since 1938. Prior to his appointment as plant manager, he has held the positions of assistant to the vice-president, superintendent of the finishing plant and superintendent of the greige mill.

Harold R. Hoke has been named superintendent of Aragon (S. C.) Mills, a division of United Merchants & Manufacturers. Hoke is a graduate of Clemson College and has been with U.M.&M. for a number of years.

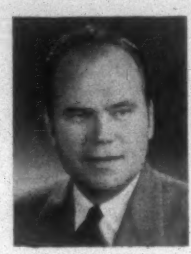
T. C. Chalmers has been named plant manager of Hadley-Peoples Mfg. Co., Siler City, N. C. Chalmers was formerly superintendent of the plant. . . . P. N. Wallace has been named plant superintendent. Wallace has been with the company 12 years. His most recent position was that of assistant superintendent.

Miller

William H. Miller has been named by Wica Chemicals Inc., Charlotte, as national sales-service manager for Wicaloids. Miller will be headquartered at the Charlotte plant. As manager of latex sales and service, Miller will guide Wica's latex plant expansion and will be active in further streamlining of the customer service latex program.

Floyd C. Newton, vice-president and treasurer of Dundee Mills, Griffin, Ga., has been named president of the Griffin-Spalding Chamber of Commerce.

Fred A. Ingram has been promoted to the position of field sales manager for The Dow Chemical Co.'s textile fibers department. Ingram will be responsible for administration of field sales activities on behalf of Zefran acrylic fiber, Lurex metallic yarn and Rovana saran micro-tape at Dow fibers sales offices in Boston, Mass., Camden, N. J., Charlotte, N. C., and San Francisco, Calif. He will continue to operate from the Camden office where he has served for eight years as district manager. Ingram joined the Dobeckmun Co.'s industrial sales department in 1943 and was district manager for industrial and Lurex yarn sales in Philadelphia for Dobeckmun prior to the company's merger with Dow in September 1958.


Squires

Cecil J. Squires has been named overseer of weaving at Cone Mills Corp.'s Proximity Plant, Greensboro, N. C. Squires was previously connected with Dan River Mills, Danville, Va. . . . Glen McDonald, formerly overseer of weaving, is now in charge of the plant's warp preparation.

James D. Hawkins has joined the research and development division of Callaway Mills Co., LaGrange, Ga., as design engineer in the mechanical laboratory. He is a graduate of Auburn with a degree in industrial design.

Norman F. Garrett, general manager of the Whitinsville Division of Whitin Machine Works, has been elected a vice-president of the company. Garrett recently joined Whitin as general manager. In taking over this position, he has assumed charge of manufacturing, product engineering, purchasing, cost control and industrial relations.

Walter E. Anderson has been named sales engineer for Scott Testers Inc., Providence, R. I. Anderson, who will be responsible for sales of Scott testers throughout the continental U. S., was previously associated in a sales capacity with the Thomas & Betts Co., and the Minnesota Mining & Mfg. Co., covering the New England area.

United Merchants & Manufacturers, New York City, has realigned its top executives. Merwin R. Haskel, formerly executive vice-president, has been named president. . . . Jack W. Schwab, formerly president, has been named chairman of the board. . . . Sanford S. Agate, formerly vice-president, has been elected an executive vice-president. Agate was also elected president of Cohn-Hall-Marx Co., a wholly-owned subsidiary. . . . The company has also promoted three vice-presidents to executive vice-presidents. They are Abbot J. Copeland, general merchandise manager of the Cohama Division; Harold Rosner, head of Robert Hall Clothes; and Charles B. Straus, head of the Seneca Textile Division. . . . Martin J. Schwab, treasurer, was elected an executive vice-president and named to the executive committee.

Roy A. Faires has been named superintendent of Carolina Mills' Plant No. 5 at Lincolnton, N. C. Faires joined the company in 1952 at its Huntersville, N. C., plant.

L. B. Barnes, chief cost accountant at Fulton Cotton Mills, Atlanta, Ga., has been named controller. Barnes has been in Fulton's financial department for the past ten years. He is a graduate of Georgia Tech. . . . C. W. Armstrong, chief accountant, has been promoted to assistant controller. Armstrong is a graduate of Washington University, St. Louis, Mo. He has been with Fulton Cotton Mills since 1954.

Scott

T. R. Scott Jr. has been appointed to the newly created position of product development manager at the American Enka Corp., Enka, N. C. In his new assignment, Scott will report to O. E. Herzog, manager, marketing technical department. Previously Scott was head of textile development research. He joined Enka in 1949.

Selwyn I. Kent has joined Roberts Co., Sanford, N. C., as public relations manager, with headquarters at 450 Seventh Avenue, New York City. Formerly an account executive with the New York public relations firm of Max Rogel Inc., Kent serviced several company and association accounts in or allied with the textile industry.

John Allen has been promoted from assistant superintendent of Plant No. 6 of Cannon Mills Co., Concord, N. C., to superintendent of Imperial Cotton Mills, Eatonton, Ga. He succeeds J. E. Orland who has been transferred to succeed Allen.

Charles E. Baxter, assistant secretary of J. P. Stevens & Co., retired on November 30. Baxter served as assistant to the executive vice-president in charge of the synthetics division in Greensboro and as director of public and industrial relations for the synthetics division. He has been associated with the textile industry since 1929 when he joined S. Slater & Sons as secretary-treasurer.

Gregory

P. C. Gregory Jr., executive vice-president of Cone Mills Corp.'s finishing division, has been promoted to president of the division. Gregory, an executive of Union Bleachery, Greenville, S. C., for more than ten years, will continue as vice-president and director of Cone Mills. The finishing division includes plants in Carlisle, S. C.; Greensboro, N. C.; and Haw River, N. C., in addition to Union Bleachery.

W. R. Martin Jr. has been named head of the applied chemical research section of the textile research center of the School of Textiles at North Carolina State College. For the past three years, Martin has been a group leader of technical service with Union Carbide Chemicals Co., South Charleston, W. Va.

C. Jordan Dulin, former assistant sales director, has been named director of sales of the Southern Dyestuffs Co., division of American-Marietta Corp., Chicago, Ill. . . . R. Query Ranson has been appointed sales and product manager.

Warnock

M. J. Warnock, vice-president, has been elected a member of the board of directors of Armstrong Cork Co., Lancaster, Pa., and designated senior vice-president in recognition of his status as a member of the president's office. Since 1954, Warnock has been responsible for the general supervision of the company's activities in the areas of finance, advertising, employee and public relations, along with a variety of specific assignments in the problems of general management.

Thomas L. Shealy has been named general manager of The Textile Shops, Spartanburg, S. C. Shealy has served as production manager for the past six years. He served as plant engineer at Borden Mills, Kingsport, Tenn., for three years before joining The Textile Shops.

Louis Bachmann Jr., executive vice-president of Bachman Uxbridge Worsted Co., New York City, was guest of honor recently at the annual dinner of the Clothing, Sportswear and Allied Industries division of The Federation of Jewish Philanthropies of New York at the Plaza Hotel in New York.

Thomas D. Lewis Jr. has been promoted from salesman to assistant sales manager of the tire cord-industrial products division of Industrial Rayon Corp., Cleveland, Ohio.

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"DEPENDABLE AS AN OAK"
"STRONG AS AN OX"
LEATHER & BELTING COMPANY
GREENSBORO, NORTH CAROLINA
Serving the Mills Over 40 Years

BROOKSBANK
Check Straps

MACOAK &
GREYHOUND
Belting

Lewis joined Industrial Rayon as a chemist in 1949 following his graduation from North Carolina State College with a degree in textile chemistry and dyeing.

J. Edward Usry has joined the Proximity Print Works of Cone Mills Corp., Greensboro, N. C., as assistant plant manager. Usry was assistant superintendent of Union Bleachery, Greenville, S. C., a Cone Mills plant, from 1953 to 1959. He was formerly with Augusta (Ga.) Chemical Co.

Fieldcrest Mills, Spray, N. C., has announced several new appointments in management personnel. A. L. Jackson, former plant manager of St. Mary's Woolen Mfg. Co., has been named assistant to R. A. Harris, vice-president in charge of manufacturing. . . . Allen J. Nelson, former assistant manager of St. Mary's, has been appointed assistant purchasing agent for raw materials. . . . J. P. Foster, former assistant superintendent of the blanket mill, will be in charge of a new mill unit, the bedspread finishing mill. . . . R. B. Mitchell, former superintendent of St. Mary's Mills has been named assistant superintendent of the blanket mill. . . . T. E. Gibbons, formerly a foreman at St. Mary's has been appointed a quality control engineer. The appointments are associated with th: transfer of St. Mary's blanket manufacturing facilities from St. Mary's, Ohio to Spray.

Carl A. Bergman has been appointed chemical sales manager in the Southern region for General Dyestuff Co., a sales division of General Aniline & Film Corp., New York City. In his new capacity, Bergman will direct and co-ordinate chemical sales in the Charlotte and Chattanooga branches of the company. Bergman has been with General Aniline for more than 22 years. Prior to his current promotion, he was assistant branch manager of Antara Chemicals, another sales division of General Aniline.

Maurice E. Calby Jr. has joined the research and development division of Callaway Mills Co., LaGrange, Ga. Calby will serve as product development engineer for the products of the Elm City Plant in LaGrange. He is a graduate of Philadelphia Textile Institute. Before joining Callaway, he was with the Thomas L. Jackson Wool Co. as a sales representative for yarn in New York City.

John Land, formerly executive vice-president of Textiles Inc., Gastonia, N. C., has been named president of the firm. He succeeds John C. Roberts who has been elected board chairman. . . . A. G. Myers Sr., formerly board chairman, has been named chairman of the executive committee. . . . Named assistant vice-presidents were F. M. Arthur, Henry Rankin Jr. and R. W. Stowe. . . . T. R. Hosick has been added to the board of directors.

J. Hearst Coleman has been elected to the board of directors of Erwin Mills, Durham, N. C., replacing the late F. E. Grier. . . . J. S. Abney, a director of the company, was elected to the executive committee, succeeding Mr. Grier.

Hollis

Charles E. Hollis has joined the machinery equipment department of the Uster Corp., Charlotte, as a sales engineer specializing in the Ustermatic. Hollis, a graduate of Clemson College, has been associated in the past with Owens-Corning Fiberglas Corp., and more recently with American & Efird Mills, Mt. Holly, N. C., as general overseer.

Stanley B. Hunt, president of the Textile Economics Bureau, New York City, has been elected president of the Washington Rayoneers. The Rayoneers is an organization of those in the man-made fibers and textiles industry who were members of the

OBITUARIES

James E. Britt, 50, former vice-president and general manager of Newberry (S. C.) Mills, died November 18. Mr. Britt was named general manager of Newberry in 1948 and was made a vice-president in 1955. He left the mill last year following a labor union dispute. Survivors include his widow, two sons and a daughter.

Summey M. Cauble, 57, superintendent of Acme Spinning Co., Belmont, N. C., died at his home December 8. He is survived by his widow and three sons.

Dudley Carlyle Chandler, 51, superintendent of the former Glenn Mill, Lincolnton, N. C., died at his home recently. Surviving are his widow, three daughters and a son.

Carlton Hall, 43, vice-president of Hall's Textile Machinery Co., Charlotte, N. C., died recently of injuries received in a tractor accident. He is survived by his widow and three children.

Robert E. Lee Holt Jr., 50, founder and president of R. E. L. Holt Jr. & Associates of Greensboro, N. C., distributor of textile supplies, died December 4. Survivors include his widow, a son and a daughter.

Raymond W. Jacoby, 70, former president of the American Association of Textile Chemists & Colorists and recipient of the Olney Medal, died December 14. He entered the textile industry in 1910 when he joined Glenlyon Print Works, Phillipsdale, R. I. Since his retirement in 1956 he had been teaching in the textile chemistry department of North Carolina State College and had been serving as a consultant to the Ciba Co. Survivors include his widow, two sons and a daughter.

William G. Sirrine, former president of Textile Hall Corp., Greenville, S. C., died December 11. Mr. Sirrine helped stage the first Textile Exposition in Greenville in 1915. There are no immediate survivors.

MORE drying can "MILEAGE"

I.C. TEFLON* COATINGS STILL RUNNING AFTER FIVE YEARS!

Many mills report that TEFLON* coatings, applied by I. C., have been in continuous operation on drying cans for over *five years* and are still giving fully satisfactory service . . . positive proof that I. C. coatings last longer and cost less.

I. C.'s tough, residue resistant TEFLON* finishes are guaranteed to *give more production "mileage"* on your equipment. I. C. also specializes in the application of non-corrosive tank linings. Next time, specify INDUSTRIAL COATINGS.

**DuPont's TFE Fluorocarbon Resin*

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industry advisory groups or served in other capacities in Washington during World War II.

Edward M. Fuller, secretary-treasurer of Greenwood Mills Inc., New York City, was elected chairman of the General Arbitration Council of the Textile Industry at the council's annual meeting December 10. He succeeds W. Ray Bell, president, The Association of Cotton Textile Merchants of New York, council chairman since 1949. Howard A. Sherman was re-named secretary-treasurer.

John Dempsey has resigned as vice-president of Collins & Aikman Corp., New York City, and general manager of its CaVel Division. He has not made known his future plans.

William Spier Jr. has been named sales representative in Virginia and the Carolinas for Atlas Powder Co.'s Wilmington, Del., regional chemicals sales office. Spier's headquarters will be in Charlotte, marking a move of the office from Richmond.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

LONG SHOALS, N. C.—Long Shoals Cotton Mills is leasing through Nationwide Leasing Co., Chicago, Ill., 12 frames of OM-S spinning machine for installation in its Lincolnton plant. The lease represents half an order of 24 frames of OM-S spinning machines. The lease transaction involves upwards of $200,000. Manufacturer of the equipment is O-M Spinning Machine Mfg. Co., Osaka, Japan. Sales and lease were handled through Edward S. Rudnick, sales representative of New Bedford, Mass. The spinning frames feature 360 spindles per frame, 3½" gauge, 2½" and 2¼" rings, 11" spinning tubes.

NEW YORK, N. Y.—The Amerotron Co., here has placed an order for 3,200 Unifil loom winders. Robert M. Cushman, Amerotron executive vice-president, said that the winders have made it possible to run more fabrics and have made available more floor space by eliminating conventional filling preparation equipment.

SHELBY, N. C.—Damages estimated unofficially at above $100,000 resulted from a recent fire at Shelby Cotton Mill here. The blaze was confined to one weave room. None of the 200 employees in the plant was injured.

ROCK HILL, S. C.—Farmac Mills here, one of the LaFar group of mills, has changed its name to Randolph Yarns Inc. The name of Farmac Mills has been associated primarily with the weaving trade while the new name, Randolph Yarns, will be known in the yarn trade as specializing in yarns of man-made fibers.

WHITINSVILLE, MASS.—Whitin Machine Works has received orders from a number of mills for new equipment. The firms and their orders are as follows: Avondale Mills, Sylacauga, Ala., Even-Draft drawing frames totalling 260 deliveries and 18 14x6½" long draft roving frames totalling 1,728 spindles; Candlewick Yarn Mills, Dalton, Ga., 24 Piedmont spinning frames totalling 5,760 spindles; six 14x6½" long draft roving frames totalling 384 spindles; and four American system Model M Monarch spinning frames totalling 608 spindles; Warren Division of the Graniteville (S. C.) Co., Warrenville, S. C., five Axi-Flo blenders and one Axi-Flo cleaner; Greenville (Miss.) Mills, three Model E wool spinning frames totalling 504 spindles; Inman (S. C.) Mills, four 12x6½" long draft roving frames totalling 360 spindles; Judson Mills, Greenville, S. C., two Super Lap machines for preparing heavy comber laps; Little Cotton Mfg. Co., Wadesboro, N. C., two Whitin 14x6½" long draft roving frames, 96 spindles each; Bladenboro (N. C.) Cotton Mills, five 12x6½" long draft roving frames, totalling 480 spindles; and Harriet Cotton Mills, Henderson, N. C., six Even-Draft drawing frames.

SILURIA, ALA.—Siluria Mills Inc. was incorporated recently and purchased the manufacturing facilities and inventories of the Buck Creek Cotton Mills here. The officers of Siluria Mills are Joseph W. Valentine, chairman; Darrell E. Knox, president; Henry M. Johnson, vice-president, treasurer and general manager; Edward Breuer Jr., secretary and assistant treasurer; and Paul A. Posey, assistant secretary. The directors are Fred F. Phillips, Henry M. Johnson, Darrell E. Knox, Edward Breuer Jr., and Joseph W. Valentine. J. W. Valentine Co., New York City, was appointed selling agent for the new company. As selling agent the Valentine Co. will assume the uncompleted contracts of Buck Creek Cotton Mills.

NEW ORLEANS, LA.—The Lane Cotton Mills property here has been purchased by M. H. Hogan, developer and contractor, from M. Lowenstein & Sons. The buildings will be renovated and will be leased for warehousing, retail operations, manufacturing and other industrial purposes.

CLARKESVILLE, GA. — Additional floor space has been added to Clarkesville Mills here, providing more weave room facilities. The addition will be completed in March or early April. The extra space is needed for installation of new looms which have been ordered. Other planned improvements include new drying cans on slashers, and modernization of the weave room. Clarkesville has about 315 employees and has been in operation since 1951. It is a subsidiary of United Merchants & Manufacturers.

NEW YORK, N. Y.—Indian Head Mills here expects 1959 to prove to have been the best year in volume of business that it has had since its inception in 1953. Preliminary figures indicate that a sales volume of about $56,000,000 was reached in 1959 as compared with $43,175,000 in 1958. The company reports that its monthly sales are running about $5 million and the outlook for 1960 is very optimistic. During the next year the company has set a goal of $62,500,000 for its sales volume.

PHILADELPHIA, PA.—The Military Clothing & Textile Supply Agency of the Philadelphia Quartermaster Depot has awarded two contracts for finished cotton sheets. Contractors, quantity and dollar value are: B. I. Cotton Mills, division of Burlington Industries, Greenville, S. C., 227,000 at $377,674.70; and Pacific Mills Domestics, division of M. Lowenstein & Sons, New York City, 147,600 at $152,780.94.

NEWTON, N. C. — Carolina Mills here has announced plans to spend $1,750,000 in the modernizing of three of its five plants. Julius W. Abernethy said that 200 Draper shuttleless looms will be added to Mill No. 3 here to be used in the production of Canton flannel for the glove trade. Equipment for yarn dyeing will be added to standing equipment at Mill No. 4 here. At Mill No. 5 in Lincolnton, N. C., the company will install 60 Saco-Lowell Magnatrol spinning frames. This facility was

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acquired by the company about six months ago. It will also be equipped with Versamatic drawing.

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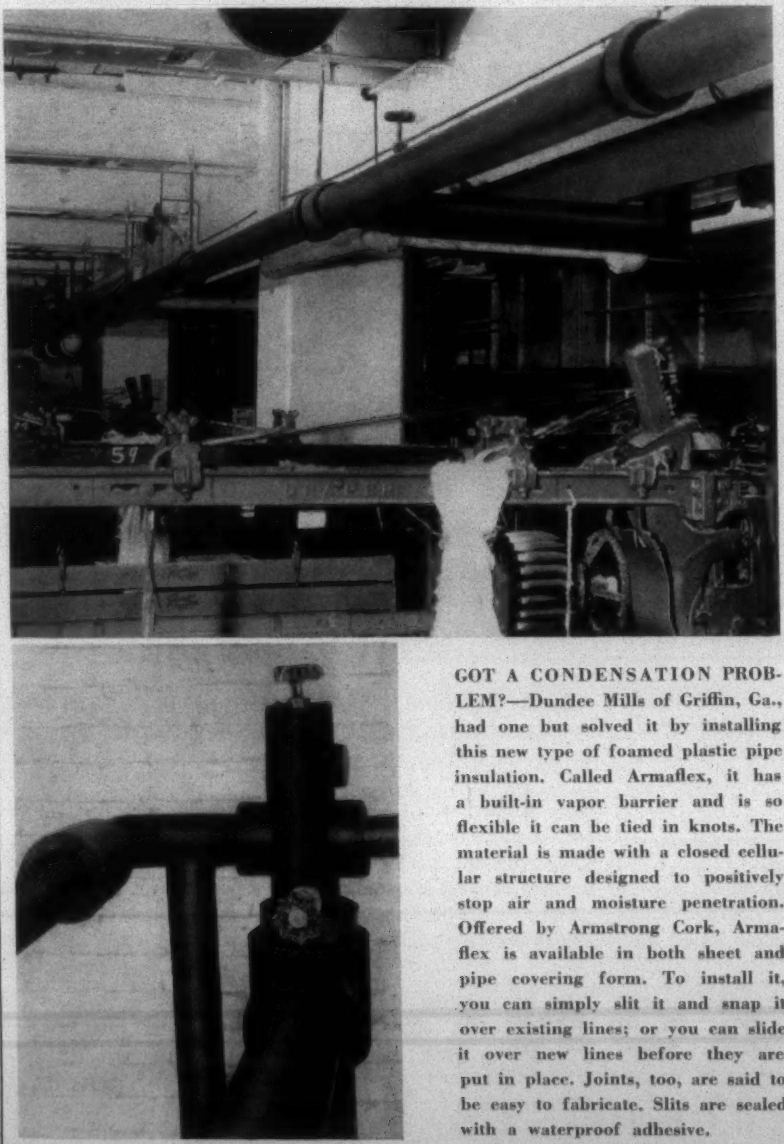
NORWOOD, N. C.—A $1,700,000 modernization program has been started by Collins & Aikman Corp. at its yarn division plant here. The program includes the installation of the latest Saco-Lowell equipment. The plant produces cotton and blended yarns.

GASTONIA, N. C.—Textiles Inc. here has reported sales of $28,571,141 for the fiscal year ended October 3. This is an increase of $4,400,000 over the sales for 1958. Net earnings for the year totalled $1,156,693, an increase of $500,000 over the 1958 total.

DURHAM, N. C.—Erwin Mills here reports profits of $1,622,058 on sales of $70,770,123 for the fiscal year ended September 30. This compares with profits of $650,574 on sales of $7,716,068 for the previous fiscal year. During the year the company spent $1,933,701 for improvements in manufacturing facilities. Properties, plants and equipment were worth $19,948,378 at the year's end as compared with $20,010,208 at the end of 1958. The number of employees at the end of 1959 totalled 5,250 against 5,397 at the end of the previous fiscal year. The number of looms was down to 5,310 from the previous total of 5,358. The number of bales of cotton used during the year increased to 183,762 from 167,694 previously. The firm produced 192,029,085 square yards of cloth in fiscal 1959 as compared with 176,508,117 square yards in 1958.



GOT A CONDENSATION PROBLEM?—Dundee Mills of Griffin, Ga., had one but solved it by installing this new type of foamed plastic pipe insulation. Called Armaflex, it has a built-in vapor barrier and is so flexible it can be tied in knots. The material is made with a closed cellular structure designed to positively stop air and moisture penetration. Offered by Armstrong Cork, Armaflex is available in both sheet and pipe covering form. To install it, you can simply slit it and snap it over existing lines; or you can slide it over new lines before they are put in place. Joints, too, are said to be easy to fabricate. Slits are sealed with a waterproof adhesive.

STARKVILLE, MISS.—Starkville Mills here has announced a $100,000 program to complete the modernization begun in 1957. The over-all program includes the replacement of all processing equipment with the exception of cards.

NEW YORK, N. Y.—Formation of a new operating division, as a result of the success of its decentralized organizational program, has been announced by Indian Head Mills here. The new division, a combination of the former greige goods division and industrial fabrics division, will be known as the greige and industrial fabrics division. Head of the new division is R. Carl Dick Jr., who has been vice-president and manager of the Whitney (S. C.) plant of the finished goods division.

SWANNANOA, N. C.—Workers at the Beacon Mfg. Co. here have rejected representation by The United Textile Workers of America for the third time in 13 years. The vote ran 1,345 to 244 against union representation. The union's other attempts were in 1946 and 1950.

SHELBY, N. C. — Expansion programs totalling $260,000 are under way at two members of the Dover group here, Dover Mill Co. and Ora Mill Co. A $60,000 warehouse will be added to Dover Mill and a $200,000 building extension is under way at Ora Mill. The 14,000-square-foot addition at Ora will provide room for rearrangement of the carding and spinning departments. Included in the $200,000 is some new equipment for the addition. The major item will be air-conditioning equipment for the spinning and carding rooms.

MCCORMICK, S. C.—John P. King Mfg. Co., Augusta, Ga., has purchased a 270-acre tract near here as a textile mill site. No immediate plans for construction have been announced but the company said that the first part of the construction will be a finishing plant. King produces wide sheeting, drill, twills and industrial fabrics. The new property fronts over 6,000 feet on the Savannah River.

NEW YORK, N. Y.—The greige cloth mills of M. Lowenstein & Sons will continue to run on a five-day week through the first quarter of 1960, according to company spokesmen.

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textile bulletin

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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; two years payable in advance, $2.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

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The Year Ahead, A Promise Of Prosperity

DURING the coming year TEXTILE BULLETIN would like nothing better than to be able to report that:

(1) Domestic textile production rises 25% over 1959

(2) Textile machinery sales jump 30%

(3) Revised depreciation rates on machinery and equipment speed modernization programs

(4) Balanced production stabilizes textile price structure, improves profit picture

(5) Textile import quotas established with the co-operation of the U. S. Department of State

(6) Wage increase granted to all textile workers across the board

(7) Textile school enrollment up 300%

(8) Interindustry co-operation hits an all-time high

(9) Revolutionary machinery developments unveiled at American Textile Machinery Exhibition and the Southern Textile Exposition

(10) Trade publication advertising revenue hits postwar peak

The list is only partial. There are many other things we might hope to report to you, but certainly those listed would do as starters. None of them is completely beyond reach. For example, production is expected to continue the upward climb it began some 16 months ago; and production capacity is in better balance than it has been for many months.

Textile machinery manufacturers have been told by the Department of Commerce that capital expenditures during 1960 are likely to exceed those of 1959 by an estimated 17%. Expenditures for 1959 have been estimated at 30% higher than for 1958, or approximately back up to the level of 1957. Replacement of obsolete equipment strengthens both the textile and textile machinery industries, and sales of machinery for the most part are expected for replacements rather than for new plants.

The ratio of net profits after taxes are expected to continue their modest climb. From a low of 1.8% in 1958 profits had inched up to 2.7% through the first half of 1959 with still further improvement expected before any leveling off. Retail sales for 1959 are expected to total more than $215 billion, a gain of some 7 to 8% over 1958. Sales for 1960 may well show another 5 to 6% increase. Corresponding with increased sales for 1960 will be a modest increase, possibly as much as 2%, in prices of soft goods. Personal income is almost sure to reach new peaks during the coming year, with a growing percentage of the wage earner's pay being slated for soft goods.

Prospects for a general wage increase are uncertain as mills are faced with the necessity of reinvesting their increased earnings in equipment and machinery. But higher earnings will permit many mills to correct disparities in supervisory salaries that resulted from pay increases granted hourly workers early in 1959. Many observers believe that since 1960 is an election year chances are good that some revision will be made to the Fair Labor Standards Act. Raising the minimum wage to $1.25 an hour would present the industry with an opportunity to grant a general increase at the same time.

As conditions improve for the industry, of course, it will have more to offer young people in the way of a career. By nature of its ups and downs, the industry undoubtedly has chased into other fields a lot of the young talent it must have in the years ahead. Opportunities abound in the industry for real potential executive ability, and favorable press notices that have accompanied the current upturn in textile fortunes should play an important part in attracting more students to textiles.

Interindustry co-operation devoted to the solving of such industry-wide problems as low wage imports is already at a high peak, and as these efforts bear more fruit attention can be focused on areas that have had to take a back seat to the more critical issues at stake. This unity of purpose can do as much for the textile industry as it has for the other major industries.

Least likely to be seen during 1960 is an about face by the Federal government on its free trade policies. The State Department seems destined to continue its present course in this regard, and although the textile industry has made progress in its efforts to be heard in Washington, only token recognition has been given to the most urgent of its pleas. Encouraging in this respect is the determination being shown by the the industry to avoid some of its mistakes of the past that have produced the cyclical boom and bust pattern.

As for the last item on the list, we just want it to be a good year for *every*body.

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TEXTILE INDUSTRY SCHEDULE

Jan. 16 (Sa)—Meeting of Board of Governors, **SOUTHERN TEXTILE ASSOCIATION**, The City Club, Charlotte, N. C.

Feb. 4-6 (Th-Sa)—Eighth annual **MATERIALS HANDLING SHORT COURSE**, Georgia Tech Engineering Extension Division, Atlanta.

Feb. 8-9 (M-Tu)—Twenty-second annual meeting, **NATIONAL COTTON COUNCIL**, Statler Hilton Hotel, Dallas, Tex.

Feb. 18-19 (Th-F)—Annual conference, **TEXTILE DIVISION, AMERICAN SOCIETY FOR QUALITY CONTROL**, The Clemson House, Clemson, S. C.

Mar. 1-4 (Tu-F)—Spring meeting, **COMMITTEE D-13, A.S.T.M.**, Sheraton-Atlantic Hotel, New York City.

Mar. 10-11 (Th-F)—Spring meeting, **THE FIBER SOCIETY**, Roosevelt Hotel, New Orleans.

Mar. 24-25 (Th-F)—Spring technical meeting, **TEXTILE QUALITY CONTROL ASSOCIATION**, Dinkler Plaza Hotel, Atlanta.

Mar. 31-Apr. 1 (Th-F)—Textile Engineering Conference, **AMERICAN SOCIETY OF MECHANICAL ENGINEERS**, North Carolina State College, Raleigh.

Apr. 7-9 (Th-Sa)—Annual meeting, **AMERICAN COTTON MANUFACTURERS INSTITUTE**, Americana Hotel, Bal Harbour, Fla.

Apr. 20-21 (W-Th)—Annual meeting, **ALABAMA TEXTILE MANUFACTURERS ASSOCIATION**, Buena Vista Hotel, Biloxi, Miss.

Apr. 26-27 (Tu-W)—Technical Advisory Committee meeting and Board of Trustees meeting, **INSTITUTE OF TEXTILE TECHNOLOGY**, Charlottesville, Va.

Apr. 29-30 (Th-Sa)—The 59th annual convention, **PHI PSI FRATERNITY**, Hotel Roosevelt, New York City.

May 11-14 (W-Sa)—Annual outing, **CAROLINA YARN ASSOCIATION**, Pinehurst, N. C.

May 19-21 (Th-Sa)—The 60th anniversary meeting, **GEORGIA TEXTILE MANUFACTURERS ASSOCIATION**, Diplomat Hotel and Country Club, Hollywood, Fla.

May 23-27 (M-F)—**AMERICAN TEXTILE MACHINERY EXHIBITION**, Atlantic City, N. J.

May 26-28 (Th-Sa)—Annual meeting, **SOUTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, The Cloister, Sea Island, Ga.

May 31-June 2 (Tu-Th)—11th Annual **COTTON RESEARCH CLINIC** (sponsored by The National Cotton Council), Grove Park Inn, Asheville, N. C.

June 23-25 (Th-Sa)—52nd annual convention, **SOUTHERN TEXTILE ASSOCIATION**, The Grove Park Inn, Asheville, N. C.

Sept. 8-9 (Th-F)—Annual meeting, **COMBED YARN SPINNERS ASSOCIATION**, The Cloister, Sea Island, Ga.

Sept. 27-28 (Tu-W)—The ninth annual **CHEMICAL FINISHING CONFERENCE**, sponsored by the National Cotton Council, Statler Hotel, Washington, D. C.

Sept. 28-30 (W-F)—Annual meeting, **NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

Oct. 3-8 (M-F)—The 21st **SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

Oct. 18-21 (Tu-F)—Fall meeting, **COMMITTEE D-13, A.S.T.M.**, Sheraton-Atlantic Hotel, New York City.

Oct. 19-22 (W-Sa)—Annual meeting, **CARDED YARN ASSOCIATION**, The Grove Park Inn, Asheville, N. C.

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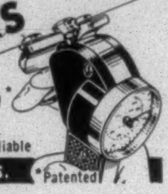

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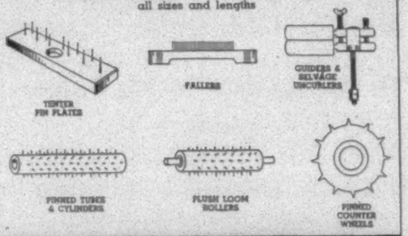

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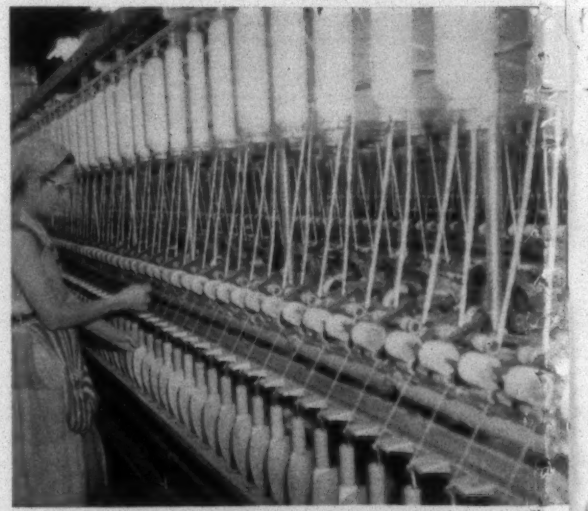
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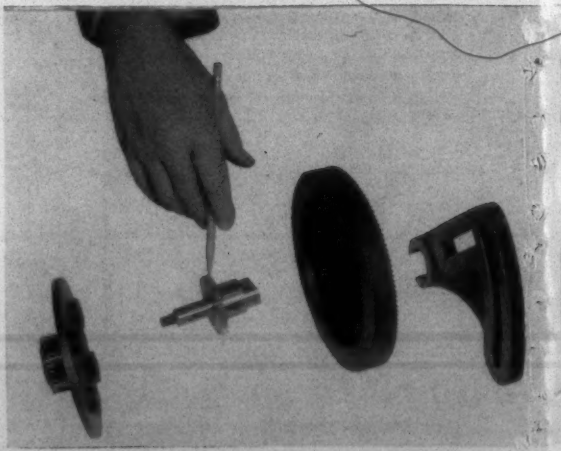
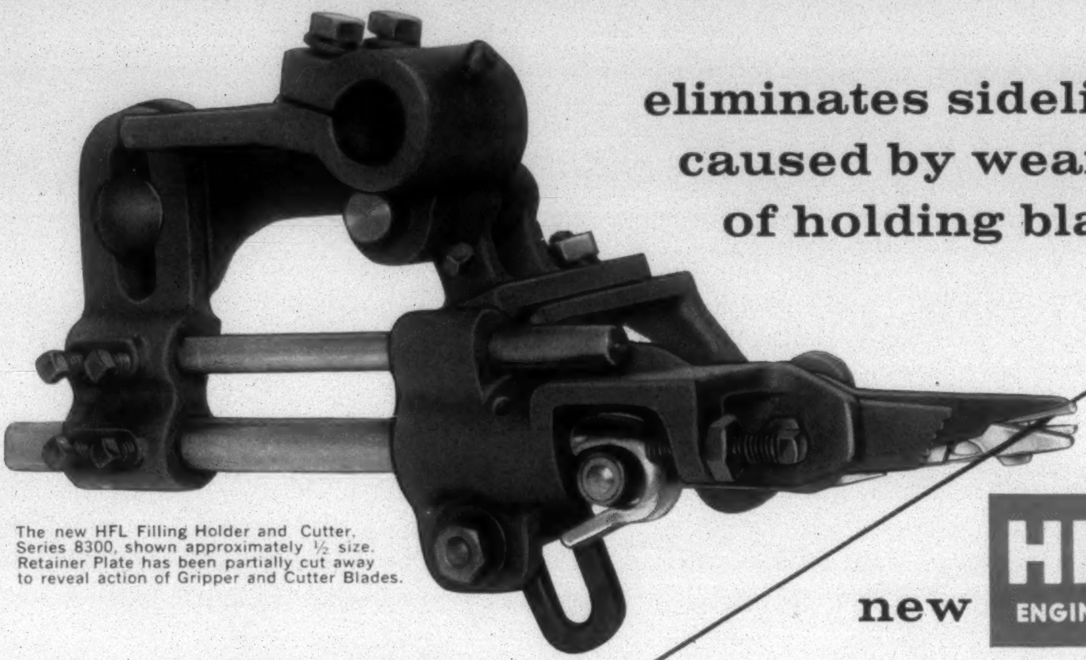

Planetary Draft Gearing, Page 52

another **preferred** loom part

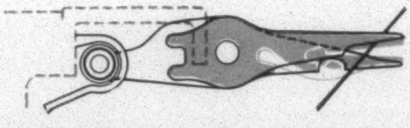


The new HFL Filling Holder and Cutter. Series 8300, shown approximately ½ size. Retainer Plate has been partially cut away to reveal action of Gripper and Cutter Blades.

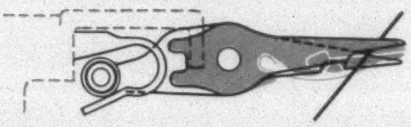
eliminates sidelines caused by wear of holding blades

new **HFL** ENGINEERED

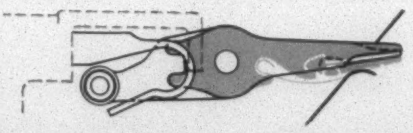
FILLING HOLDER AND CUTTER*



At the beginning of the cycle, both gripper and cutters are wide open to permit filling of any type or size to pass between them in a straight line.



Next, the all-steel gripper, with improved toggle construction, closes on the filling without bending it, and continues to hold during the cutting.



At the end of the cycle, the cutter blades cut straight across the filling with a scissor-like action; the filling is still held to prevent drag-ins.

The HFL Holder and Cutter is the effectual answer to the problem of costly seconds resulting from drag-ins and sidelines caused by wear or lag of fibre holding blades.

This new part can accommodate, without any adjustment, all types and sizes of filling (cotton, rayon, fiberglas, etc.). Its hardened steel gripper holds the filling firmly and in a straight line, before and during the cut. There is no fibre to wear, and no bending of the filling, as with holding blades of conventional cutters. Only one factory-adjusted setting is necessary for the lifetime of this part for correct opening and closing the gripper and curved cutter blades in exactly the proper sequence.

Tested on 800 looms throughout the country under actual operating conditions, this new loom part is a performance-proven unit. It has also been tested at 200 oscillations per minute for a period equivalent to a 5-year mill run. Disassembly after test showed no measurable wear.

The new HFL Filling Holder and Cutter, Series 8300, represents a complete departure from the conventional Thread Cutter in action and material. It will help increase volume, improve quality, and eliminate downtime. Livermore Leadership again asserts itself by presenting another preferred loom part to solve one more problem in the weave room!

Write for Holder and Cutter Brochure — 4

*Patented and Patents Pending

HFL
IMPROVED LOOM PARTS

H. F. LIVERMORE CORPORATION

ESTABLISHED 1887

EXECUTIVE OFFICES & PLANT
BOSTON 34, MASS.

SOUTHERN DIVISION
GREENVILLE, S. C.

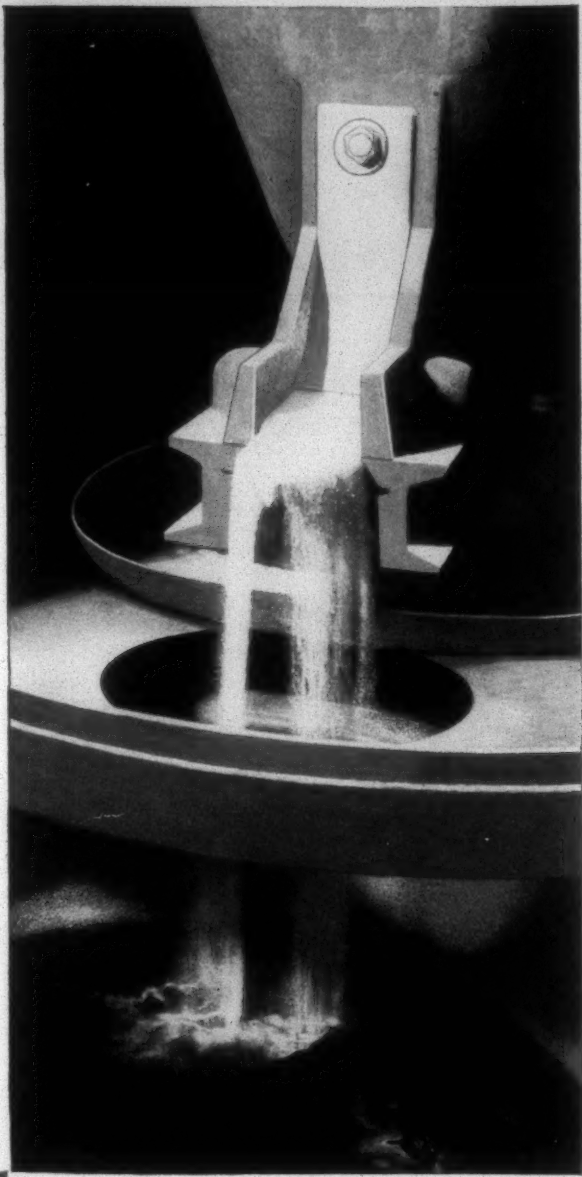
Now you can see for yourself!

The ideal way to demonstrate that Vatrolite* is truly FREE FLOWING, DUST FREE and UNIFORM is to try it at your plant in a dry feeding operation such as that illustrated.

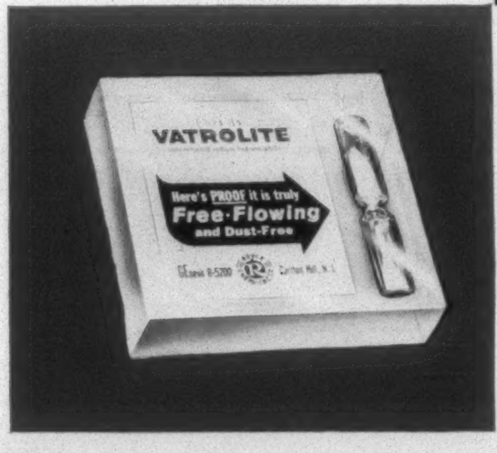
However, to prove in another way how truly fine a hydro can be made, Royce Chemical has ordered a quantity of attractive flow glass—paper weights containing the same Vatrolite that is delivered to you for vat color reduction and stripping.

Watch it flow easily through the tiny orifice . . . proof positive that Vatrolite *is* free flowing, dust free and uniform . . . the reasons why Vatrolite is preferred not only for consistent performance but for ease of handling and perfect dry feeding.

*CONCENTRATED SODIUM HYDROSULPHITE



Vatrolite in dry feeding operation.



Make sure you request this flow glass—paper weight from your Royce representative when he makes his next call.

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